STEAM-ELECTRIC GENERATING PLANTS IN PACIFIC NORTHWEST

No. 82–9

HEARINGS

BEFORE THE

COMMITTEE ON PUBLIC WORKS
HOUSE OF REPRESENTATIVES

EIGHTY-SECOND CONGRESS

FIRST SESSION

ON

H. R. 4963

A BILL TO AUTHORIZE THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF CERTAIN FUEL-FIRED ELECTRIC GENERATING PLANTS IN ORDER TO MAKE IT POSSIBLE FOR THE DEPARTMENT OF THE INTERIOR TO MEET CERTAIN DEFENSE POWER REQUIREMENTS IN THE PACIFIC NORTHWEST, AND FOR OTHER PURPOSES

SEPTEMBER 27, 28, OCTOBER 1 AND 2, 1951

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STEAM ELECTRIC GENERATING PLANTS IN PACIFIC NORTHWEST

THURSDAY, SEPTEMBER 27, 1951

HOUSE OF REPRESENTATIVES,
COMMITTEE ON PUBLIC WORKS,
Washington, D. C.

The committee met, pursuant to notice, at 11 a. m. in room 1302, New House Office Building, Hon. Charles A. Buckley (chairman) presiding.

The CHAIRMAN. The meeting will come to order. The Chair recognizes Mr. Jackson in connection with the bill H. R. 4963.

(H. R. 4963 reads as follows:)

[H. R. 4963, 82d Cong., 1st sess.]

A BILL To authorize the construction, operation, and maintenance of certain fuel-fired electric generating plants in order to make it possible for the Department of the Interior to meet certain defense power requirements in the Pacific Northwest, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of August 20, 1937 (50 Stat. 731), as amended, is further amended by adding thereto a new section, to be designated section 14, reading as follows:

"SEC. 14. (a) In order to permit the more effective utilization of the transmission facilities constructed and operated by the Secretary of the Interior in connection with the disposition of power from Bonneville Dam and other Federal hydroelectric projects in the Pacific Northwest, in order to increase the amount of hydroelectric energy which can be marketed from existing and authorized projects, and in order to facilitate coordinated operation of Federal hydroelectric projects in the Pacific Northwest, to the end that power requirements for defense and for publicly and privately owned distribution systems in that area can better be met, the Secretary of the Interior is authorized—

(1) to construct, operate, and maintain at suitable locations in the Pacific Northwest three fuel-fired electric generating plants, each having a rated capacity of approximately one hundred thousand kilowatts;

(2) to construct, operate, and maintain at suitable locations in the Pacific Northwest five fuel-fired electric generating plants, each having a rated capacity of not in excess of twenty thousand kilowatts; and

(3) in connection with the construction authorized by paragraphs (1) and (2) of this subsection, to procure services as authorized by section 15 of the Act of August 2, 1946 (60 Stat. 810), for periods in excess of one year.

"(b) The electric energy made available to the United States pursuant to subsection (a) of this section shall be disposed of by the Secretary of the Interior in accordance with the applicable provisions of this Act, except that for the duration of the emergency period defined in subsection 124A (d) (2) of the Internal Revenue Code, as amended by subsection 216 (a) of the Revenue Act of 1950, the electric energy generated at the plants authorized in paragraphs (1) and (2) of subsection (a) of this section shall be disposed of in such manner as will aid in carrying out the objectives of the Defense Production Act of 1950, as heretofore or hereafter amended and supplemented.

"(c) The continuing fund established pursuant to section 11 of this Act shall be available for, in addition to the purposes authorized in that section, making all expenditures directly incident to purchase of fuel and payment of other variable costs necessary for the operation and maintenance of the fuel-fired electric generating plants constructed pursuant to this section.

"(d) The costs assigned for return from revenues derived from the sale of power generated at all Federal projects now or hereafter constructed in the Pacific Northwest, for which the administrator or any successor to him is now or hereafter designated the marketing agent, and the costs incurred pursuant to this section may be considered as a unit by the Secretary of the Interior in fixing rates and in meeting payout requirements: *Provided*, That nothing in this subsection shall be construed as modifying in any way the requirements of existing laws with respect to the standards of feasibility applicable to reclamation or other Federal projects in the Pacific Northwest, the assignment of obligations for repayment or return of the costs of such projects, the availability of funds for the construction or the operation and maintenance of such projects, or the disposition of any of the moneys received by the United States in connection with such projects. Rates fixed by the Secretary pursuant to this subsection or for power to be disposed of pursuant to subsection (b) of this section shall become effective without further confirmation or approval.

"(e) For the purposes of this section, the Pacific Northwest shall be defined as the area, within the United States, comprising the Columbia River Basin, the basins of other streams entering the Pacific Ocean between the Canadian boundary and the California-Oregon boundary, and the closed drainage areas of Oregon."

(The reports of the Department of the Interior and the Federal Power Commission on H. R. 4963 are as follows:)

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., September 27, 1951.

Hon. CHARLES A. BUCKLEY,
Chairman, House Committee on Public Works,
House of Representatives.

MY DEAR MR. BUCKLEY: Thank you for the opportunity to report on H. R. 4963, a bill to authorize the construction, operation, and maintenance of certain fuel-fired electric generating plants in order to make it possible for the Department of the Interior to meet certain defense power requirements in the Pacific Northwest, and for other purposes.

Enactment of this bill, which I strongly urge, would permit the Secretary of the Interior to construct, operate, and maintain at suitable locations in the Pacific Northwest three steam electric generating plants, each having a rated capacity of approximately 100,000 kilowatts, and five gas turbine electric generating plants, each having a capacity of not to exceed 20,000 kilowatts.

These plants are needed in order to meet power requirements for defense purposes and distribution systems in the Pacific Northwest. That area, which is strategically important for locating defense loads, is at the present time the most critical area for electric energy generation in the entire country. The Department of the Interior is taking a calculated risk in certifying the Pacific Northwest as a location for defense plants requiring large amounts of power. The tremendous power potential in the area, historically favorable water conditions, and the critical need for power justify this policy. However, it is implicit in this procedure that in a critical water year it will become necessary to curtail important utility services.

The construction of three steam plants and five small gas turbine plants will enable the region to make a nearly contribution to the defense program on the basis of this policy. The steam plants can be constructed and brought into operation at least 2 years earlier than any newly authorized hydroelectric plants, and the gas turbine plants can be operating 9 months earlier than the steam plants. These fuel-fired plants will add 400,000 kilowatts to the power capabilities of the region. They will firm up 400,000 kilowatts of secondary hydro energy, thus permitting that much more firm load to be served for defense purposes. The plants will have permanent value, even after the hydroelectric situation in the Northwest is improved in the last half of this decade, by supplying power under low water conditions, peaking capacity and a source of stand-by power in the event of a loss of a transmission line or generator, and in reducing transmission costs and displacing power that otherwise would have to be generated at existing high-cost steam plants in the area. The Pacific Northwest is particularly suitable for the installation of these fuel-fired plants, as they complement the Federal hydroelectric projects and backbone transmission system now in existence, and each makes the other more valuable.

It is not contemplated that the predominant hydroelectric development of the region is to undergo a change in major character through construction of steam plants. The proposed plants are to be ancillary to the existing and proposed Columbia River system hydro development. Only a limited proportion of fuel-fired generating capacity would be found economically justified under existing circumstances in the Pacific Northwest.

The power generated at the new plants will be marketed under the Bonneville Project Act, except that rates will be approved by the Secretary of the Interior and that for the duration of the emergency the power will be used to carry out the objectives of the Defense Production Act of 1950. Through its past activities the Federal Government has assumed a utility responsibility for supplying the energy needs of distribution systems of this region, and the present power deficiency situation requires the construction of new generating capacity.

Immediate construction of fuel-fired plants in the Pacific Northwest has most significant long-range aspects. The Nation is seeking a tremendous supply of raw metals, particularly aluminum, produced by the electro-process industries. It is important that the expansion of these electro-process industries be in areas where power costs are low so that the industry can successfully compete under normal peacetime conditions. During World War II, four aluminum plants costing $85 million, with an annual capacity of 142,000 tons, were built in locations where they could not compete successfully after the war because of their relatively high power costs. These plants were shut down and were either salvaged or left idle. If low-cost power had been available for their operations, these plants could have contributed to the income and wealth of the Nation in the period following the war and today their products would be available for national defense.

If new plants are located in areas where power costs are high, either the price of the product will have to be raised or production will have to be cut back with the return to a competitive economy. One new aluminum producer seeking certification requested a 6-cent a pound price increase if he were required to locate in a high-cost power area. With an annual aluminum market of 1,500,000 tons, which will be reached within a few years, such a price increase would cost the consumer an additional $185 million per year for the unfabricated metal. Also, the market for aluminum goods would be reduced if higher prices prevailed. Such an increase in price might in itself result in overproduction of the metal for peacetime markets.

The hydroelectric projects in the Pacific Northwest now under construction, authorized, or planned will provide a substantial block of low-cost power for the expansion of these electro-process industries in the latter half of this decade. The fuel-fired plants to be authorized by the bill will help to bridge the gap between the present time, with its shortage of firm power, and the latter half of the 1950's with its increased supply of low-cost power. Electro-process industries can be established now to meet defense needs and still be located where they should be when the new hydro plants come into production.

A more detailed treatment of the technical and economic factors involved in the proposals for steam and gas turbine electric generating plants will be found in a justification attached hereto as exhibit I. You will note that the justification for the steam plants is presented on alternative grounds, one for serving defense loads and the other for serving general area loads without any necessary relationship to utilization for defense purposes. It will be noted that even under the second alternative, the cost of meeting the loads by utilizing the steam plants in combination with the hydroelectric plants is only slightly in excess of the cost of meeting the same loads from new hydroelectric plants. The fact that the steam plants can be installed more rapidly than hydroelectric plants more than makes up for the slight additional cost. When the availability of this power for defense purposes is taken into consideration, the justification for these plants is beyond question.

Weather conditions and other physical factors must determine the extent to which the new fuel-fired plants would be actually operated during any given period of time. During periods of critically low water supply, the entire output of the plants would be needed. During other periods, generation would be held down to the minimum amounts required for peaking purposes or other supplementation of the basic hydro-power supply. Due to the unpredictability of the factors controlling the extent of operation during any future period, it would be utterly impracticable to attempt to estimate in advance of the occurence of these factors the amount, and therefore the cost of fuel, labor and other operation and maintenance items. For these reasons the bill authorizes a very limited

expansion of the purposes for which the continuing fund established by section 11 of the Bonneville Act may be used by extending such use to meeting expenses incurred for the purchase of fuel and other variable costs for operating and maintaining the new fuel-fired plants. The existing purposes of defraying emergency expenses and insuring continuous operations, of course, will also be applicable to these new plants.

The cost of power generated at the new fuel-fired electric plants to be authorized by the bill, while low in comparison with the cost of other fuel-generated power and new higher-cost hydroelectric projects, still will be in excess of the cost of hydroelectric power generated at Bonneville and Grand Coulee Dams.

The fuel-fired plants will introduce new elements of rate making into an already complex rate situation. Some flexibility of rate making principles will be desirable, and steam power generated for some defense purposes, and to displace the output of existing inefficient steam plants may call for slightly higher rate schedules. But since all the power will be merged and marketed over the same transmission system, rate uniformity, with due regard for such special factors, is a requsite.

The bill will remove whatever existing doubts there may be and will provide clear statutory authority for pooling all obligations assigned for repayment out of power revenues from Pacific Northwest projects. It will make no change whatever in the financial requirements of any project. The costs assigned for repayment out of power revenues at each project determined solely by the laws applicable to that project, will merely be added together, and the lowest possible uniform rate to liquidate the total of these costs can then be established.

The bill, in this respect, is not a substitute for the much broader Columbia Basin account legislation which the Department of the Interior recommended be included in the River and Harbor Act of 1950. This Department still is of the opinion that a Columbia Basin account along those lines should be established by law and intends to present a draft of bill for this purpose as soon as practicable. The enactment of such a bill would supersede the much more limited pooling provisions of this bill.

The pooling provisions relate only to accounting for rate and pay-out purposes. They will in no way affect the flow of funds to and from the Treasury. Except for the minor amendments to the continuing fund, above outlined, appropriations with respect to these projects will be required the same as at present and receipts will be paid into the appropriate funds in the Treasury under applicable laws.

The Bureau of the Budget has advised that there is no objection to the submission of this report to your committee.

Sincerely yours,

OSCAR L. CHAPMAN, *Secretary of the Interior.*

FEDERAL POWER COMMISSION,
Washington 25, D. C., September 27, 1951.

Hon. CHARLES A. BUCKLEY,
Chairman, Committee on Public Works,
United States House of Representatives,
Washington, D. C.

DEAR CHAIRMAN BUCKLEY: There are enclosed four copies of the report of the Federal Power Commission on the bill H. R. 4963, to authorize the construction, operation, and maintenance of certain fuel-fired electric generating plants in order to make it possible for the Department of the Interior to meet certain defense power requirements in the Pacific Northwest, and for other purposes.

The Bureau of the Budget has stated that there is no objection to the submission of this report to your committee.

Sincerely yours,

MON C. WALLGREN, *Chairman.*

FEDERAL POWER COMMISSION REPORT ON H. R. 4963, EIGHTY-SECOND CONGRESS

The bill raises several questions regarding the Pacific Northwest: (1) The need for fuel plants to supplement hydroelectric generation; (2) basin accounting for power revenues and expenses, and (3) the method of fixing rates for the sale of Government-produced power.

In only a relatively small number of instances can the hydroelectric power potential of a site be fully utilized without fuel-electric power support; conse-

quently the development of water-power sites must usually be planned with a view to use of the hydroelectric plant in conjunction with other power sources, both hydro and fuel. The cheapest and most reliable power supply can usually be obtained from a combination of fuel-electric and hydroelectric plants rather than from the exclusive use of either.

With respect to the need for fuel stations to support the hydroelectric plants in the Pacific Northwest, the Federal Power Commission went on record as early as 1941 in recommending the construction of fuel-electric plants in that region. Such plants are as badly needed now as they were at that time because the Pacific Northwest is still a region that has power shortages and relatively little fuel power.

The latest estimate of power supply and requirements in the Pacific Northwest for 1954 indicates a shortage of about 350,000 kilowatts of generating station capacity and 700 million kilowatt-hours of energy with adverse stream flow conditions. Even if 1954 should be a year of median stream flow, there would still be shortages of more than 300,000 kilowatts of capacity and 200 million kilowatt-hours of energy. At the present rate of hydroelectric plant construction planned for that region, the shortages cannot be made up until 1957 and even at that time there will still be an energy shortage if stream flow conditions should be adverse. Under the circumstances there is no question as to the need for generating capacity and energy in the amounts the proposed fuel-electric plants could supply.

In addition to the large amount of firm power available from Federal hydro plants in the Columbia Basin there is also available during spring and summer months considerable nonfirm energy. Fuel-electric plants could be utilized to support this hydroelectric generation in one or the other of two ways—the nonfirm power from the Government-owned hydroelectric plants might be sold to electric utilities that could provide the necessary fuel plants to make the entire output firm, or the Government might build the necessary fuel plants so as to utilize the intermittent power along with a small amount of fuel power, and sell the entire amount as firm power. The latter course is the one recommended in H. R. 4963.

According to articles which have appeared in technical publications, it is the plan of Federal agencies interested in power developments in the Pacific Northwest to construct three 100,000 kilowatt steam-electric stations, one at each of the following locations: Coos Bay, Oreg., Longview, Wash., and Bremerton, Wash. These plants would all be located where fuel deliveries can be made by water and they would be large enough to permit low construction costs combined with high efficiency. The result would, therefore, be relatively low energy costs and a reduction in over-all power costs in the region.

Section 14 (a) (2) proposes the construction of five fuel-fired electric-generating plants each having a rated capacity of not in excess of 20,000 kilowatts. The Bonneville Power Administration studies indicate that these plants would use 5,000-kilowatt gas turbines. Although the unit capital cost of such plants may not be greater than that of the 100,000-kilowatt steam plants, production costs will be higher and reliability of the units will be lower. Since a basic need of the Bonneville system is fuel support for hydroelectric plants, it is believed that this can most economically be supplied by the 100,000-kilowatt steam units. The trend in modern construction is to the use at central locations of the largest fuel-fired units that can advantageously be used on the load, rather than to the construction of small fuel plants located at the extremities of the system.

The addition of a certain amount of fuel-electric generating capacity in the Pacific Northwest may not represent a clear gain of this amount in increased capacity for carrying load in the entire country on account of limitations in our ability to produce and erect such capacity. Thus additional plants in the Bonneville area may result in delay in the erection of a corresponding amount of capacity elsewhere. It is estimated that actual power plant construction in the United States will fall 2,000,000 to 4,000,000 kilowatts short of scheduled installations in 1952 due to material shortages. Predictions are made that this will occur unless considerable increases can be made in the allocations of critical material during the fourth quarter of 1951 and in succeeding quarters. If the lag should continue, the erections of steam-electric plant capacity might still be behind schedule in 1954 and this would necessitate decision as to whether preference should be given to defense industries in the Pacific Northwest or elsewhere.

With respect to the second question, the proposal contained in section 14 (d) providing for the setting up of a basin account to receive revenues derived from

the sale of power at all Federal projects and to meet the costs incurred in connection with such generation, the Commission has previously expressed the view that some arrangement for pooling revenues from the various power sources in the Columbia Basin is not only desirable but necessary. The purchaser of electric energy may, at different times, utilize hydroelectric energy or fuel-generated energy or a mixture of the two. It is difficult and generally unsatisfactory to set up schedules of rates that discriminate in the charges for energy according to the source, and so far as possible, such rate structures should be avoided. Since the energy from these plants would be commingled with other energy generated by Federal hydroelectric plants in the area, there is presented a serious question of Federal power policy. At the present time the Commission is required to approve rates for the sale of energy generated at Bonneville, which was constructed under flood control acts, but has no authority with respect to energy generated at Grand Coulee, constructed under the Reclamation Act.

In authorizing some other Federal power projects, the Congress has found it desirable to have the rates proposed by the agency responsible for marketing power from a project subject to review by an independent body which applies to the sale of power from Federal projects the same expert judgment as it is required to apply to rate control over public utilities, having in mind, of course, the peculiar problems of public power operations. For some years Congress has required the Federal Power Commission to make cost allocations and review rate schedules in connection with power projects of certain Federal agencies under sections 5 (a), 6, and 7 of the Bonneville Act (50 Stat. 731), sections 5 and 6 of the Fort Peck Act (52 Stat. 403), and section 5 of the Flood Control Act of 1944 (58 Stat. 887).

Rate review and cost allocation authority similar to the authority in the other statutes referred to should be considered in connection with the proposed bill. If Congress should decide to provide in the bill H. R. 4963 for rate review by the Federal Power Commission, however, it is recommended that such review be made effective by including therein all power sold within the Pacific Northwest from Federal projects and subjecting such power rates to the examination, approval, and revision of the Commission, and, in the event rates or changes in rates are not proposed, giving the Commission authority to prescribe rates.

The question of what agencies, public or private, should provide the fuel-electric plants so urgently needed in the Pacific Northwest is, of source, a question of policy for Congress to decide. If Federal construction is decided upon, it is recommended that legislation along the lines of H. R. 4963 be enacted.

FEDERAL POWER COMMISSION,
By MON C. WALLGREN, *Chairman.*

STATEMENT OF HON. HENRY M. JACKSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. JACKSON. Thank you, Mr. Chairman. I have a statement which I would like to read in support of the bill.

Mr. Chairman, I come before this committee to urge approval of H. R. 4963, which I introduced on July 26, 1951. The bill amends the Bonneville Project Act to authorize the Secretary of the Interior through the Bonneville Power Administrator to construct, operate, and maintain certain fuel-fired electric generating plants in the Pacific Northwest. The facilities authorized by this bill will consist of three steam-electric generating plants of 100,000 kilowatts capacity and five smaller gas turbine installations with capacities of not over 20,000 kilowatts each.

At the outset it is important for this committee to understand that this program is a straight engineering proposition which would have been necessary at some time in the future, even in the absence of any serious power shortage.

However, I am sure the committee is aware of the situation which now prevails throughout the United States. I refer, of course, to the

increasing national power shortage. This shortage is affecting our mobilization efforts. It is the bottleneck in the production of aluminum. Mobilizer Charles Wilson is deeply concerned because we are behind in our aluminum production schedule.

There are a great many reasons why the steam plants should be constructed as soon as possible. The basic reason why these plants are a good investment which can be repaid in 30 years is that they can firm up hydro power which would otherwise be interruptible. No one, not even the engineers can determine how much the flow of water will be; consequently, they cannot determine how much interruptible power will be available in any 1 year. It is, therefore, common business sense to firm up all interruptible power. This is the course of action followed by all producers of hydro power, including private utilities.

The advantages of this are difficult to explain except in simplified form. What Bonneville Power Administration can charge for power is governed by the market for its different classes of power. Over a long period of time it can charge one rate for its interruptible and secondary power and, due to its greater reliability, a higher rate for its firm power. But the amount of power which can be sold as firm in a purely hydro system is controlled by the amount of power which can be produced under minimum-year water conditions.

Mr. JONES. May I make an inquiry? What is your ratio of firm power to total output now? Do you have those figures?

Mr. JACKSON. In order to be accurate about it, Mr. Jones, I would rather ask Mr. Schultz, who is the chief engineer of Bonneville. He is here this morning. That is true of all these technical questions, as you can understand. This steam-plant proposition is a straight engineering problem, and as to technical points I do not feel in a position to answer them properly, but I will be happy to answer any of the questions that I am qualified to answer.

The amount of power which can be sold as firm in a purely hydro system is controlled by the amount of power which can be produced under minimum-year water conditions; the rest must be sold as interruptible, even though much of it will be available more than 90 percent of the time. By using the fuel-fired plants an average of about 25 percent of the time over a period of years, it is possible to convert 400,000 kilowatts of interruptible to firm power, with a resulting long-term increase in revenues to the system.

Even after the eventual full development of upstream storage on the Columbia, these plants will remain useful as a supplemental power source and to firm up power supplied to the Northwest power pool by smaller streams. They will also be permanently useful to provide peaking capacity in future years.

The reason for requesting this program now is that the Pacific Northwest, in spite of its tremendous potential of hydroelectric power, has at present a serious shortage of power. In the event of a low-water year such as now seems to be developing, the effect of this situation will be a power shortage which may run to 500,000 kilowatts, crippling Northwest industrial production, putting thousands of men out of work and seriously damaging the area's defense effort.

This is a sad situation at a time when the Nation is striving mightily to build its defenses and increase its production. Regardless of how this state of affairs developed, it is a real national problem which must

be solved. There are several remedies available to alleviate the shortage, in both the long- and short-term programs of the Bonneville Power Administration. The long-term program involves the immediate commencement of several of the large multipurpose dams on the Columbia and its tributaries, but none of these can commence generation before the end of 1955. The short-term program involves the expeditious completion of projects now under construction, as well as the addition of the fuel-fired generating facilities included in this bill.

If this authorization is made now, the vital Northwest defense effort can be provided with 100,000 kilowatts of gas-turbine capacity for the winter of 1953 and 300,000 kilowatts of steam-electric capacity before the winter of 1954. One of the advantages of this program in the present emergency is that it can add these large blocks of power in a shorter time after starting construction than any other program.

This is important: The construction of these steam plants is one of the quickest ways to get 400,000 kilowatts of power for aluminum production. Furthermore, all of the competent power people in the Northwest agree that in any system such as Bonneville's supplementary steam plants are a necessary adjunct to system operations. These fuel-fired plants will be extremely efficient units and as such can be used as much as necessary during the present and any future emergency. However, because of fuel costs they cannot and are not intended to replace or compete with hydro power.

It should be emphasized that this Federal fuel-fired generating program was decided upon only after extensive investigation and discussion showed that no private or non-Federal public agency would undertake such a project. The reason for this is that these plants only become profitable when they are supplementary to and integrated with the rest of the system. Every other possible source of power for the area has been investigated, including the possibility of increasing stream flows by artificially induced precipitation. Plainly and simply, that is rain making.

There are other advantages resulting from the design and location of these plants which add greatly to their desirability. Because of their location near load centers at the extreme edges of the Bonneville system, far from the major sources of generation, these plants will avoid the necessity of constructing new transmission lines to serve the increasing loads in these areas. They will also prevent the line losses which are unavoidable in any long-distance transmission. An example of this is the proposed Coos Bay plant in Oregon, which will be 500 miles from Grand Coulee Dam and about 250 miles from Bonneville Dam.

Two other incidental advantages are also of real importance. One is the permanent increase in flexibility and dependability these plants will provide by their ready availability in an emergency stand-by capacity. The gas turbines can be cut in very rapidly because of their basic engineering characteristics. The other important feature is the decentralization provided by this whole plan. In the event of a full-scale attack on this country, the dispersal characteristics of this generation might well turn out to be its greatest advantage.

In considering this legislation, I ask nothing except that your committee consider the present critical defense need for the power it can provide and the great long-term benefits I have described. These are real benefits, Mr. Chairman, both for the Northwest and the Nation.

In connection with my statement, I would also like to submit a press release that I gave out on August 3 of this year, calling attention to the fact that we might face a very serious power shortage. The press release was made shortly after the introduction of my bill.

The CHAIRMAN. Without objection it is so ordered.

(The press release is as follows:)

[Press release from the office of Congressman Henry M. Jackson, August 3, 1951]

"IMPENDING SHORTAGE OF POWER INTENSIFIES CAMPAIGN FOR STEAM PLANTS," JACKSON SAYS

A predicted power shortage of 600,000 kilowatts, perhaps the worst in the history of the Bonneville Power Administration, has intensified efforts to obtain authority for the construction of eight fired steam- and gas-driven plants in the Columbia River Basin.

Congressman Henry M. Jackson, of Everett, who introduced legislation authorizing the plants July 26, announced today that every effort will be made to obtain congressional approval of the steam plant bill before the end of the present session. Jackson revealed that the bill had been referred to the House Committee on Public Works, and that hearings would be held before the end of the month.

"The impending power shortage in the Pacific Northwest constitutes a clear and present danger to our defense effort," Jackson warned. "The proposed plants, when built, will produce 400,000 kilowatts of firm power for industries producing vital military items and eliminate the uncertainty and financial losses of brown-outs in the future."

The Everett Congressman said he was particularly alarmed about the effect of any power shortage on the aluminum producers in the region. "The truth of the matter is that any power shortage will have to affect the average consumer before it hits the aluminum plants. The goal of the defense planners aims at raising aluminum production to 1.5 million tons a year, nearly double our capacity before Korea. Obviously, we have to do everything in our power to prevent cuts in production because of power shortages," he said.

Explaining the plans for the proposed plants, Jackson said they would be built at key points in the Bonneville system where they would be most valuable in firming up interruptible power and saving transmission costs. "For this reason the eight plants would be located in areas where the transmission losses are greatest."

Jackson revealed that the Government will realize transmission savings as high as $2,800,000 a year if the plants are constructed, in addition to the revenue derived from the sale of power generated at the plants. "The firmed-up power will, of course, bring much higher prices than the interruptible power it would replace."

The total cost of the new plants, set at $60,000,000, would be repaid to the Treasury within 30 years as a result of their operation as part of a balanced system.

The Everett Congressman pointed out that the proposed plants, in addition to helping relieve the current critical power shortage and make additional power available for defense purposes, have a permanent value for the Pacific Northwest. "Even when the hydro situation improves in the last half of this decade, the plants will supply power under low water conditions, peaking capacity, and provide a source of stand-by power if a transmission line or generator goes out of service. In addition," he added, "they will reduce transmission costs and displace power that otherwise would have to be generated at existing high-cost non-Federal steam plants in the region."

Mr. JACKSON. I would also like to include some telegrams and editorials from leading newspapers in the Pacific Northwest supporting the proposed legislation. Included in the telegrams is one from the master of the Washington State Grange, Mr. Henry Cartensen. I will not burden the committee by reading the telegrams or the editorials at this time.

The CHAIRMAN. Without objection, they may be included in the record.

(The documents referred to above are as follows:)

[From the Statesman, Salem, Oreg., July 19, 1951]

FEDERAL STEAM POWER PLANTS

The Statesman has been urging favorable consideration for construction of steam electric plants in the Northwest, and notes that the Oregonian approves Federal venturing in this field. Congressman Jackson, of Washington, has inpicked three sites, Coos Bay, Longview, and Bremerton as logical locations for such installations. The Oregonian reports that Northwest private power companies are agreeable to such Federal investment.

The reason for this approval is not hard to find. The companies are eager for more power and want it quickly. Steam plants of good size can be built in around 18 months, while big hydro plants take years. But private companies are loathe to build these steam plants themselves because the unit cost of steam-generated juice is much higher than hydro. These heavier costs might force companies building such plants to call for rate increases, creating a disparity in rates with public ownership distribution. If the Federal Government builds the steam plants the costs would go into the pool of expense and all purchasers of Federal power would pay the added cost.

It is very doubtful if congress will go along, however, because the private power industry over the country doesn't want to see the Government get into steam generation and has fought strenuously the previous attempts in this direction. TVA finally got approval but the Reclamation Bureau didn't for Central Valley, Calif.

The Northwest should have more steam plants to take care of peak loads, to meet emergencies, and to expedite delivery of more power. If the Government doesn't do the job private utilities should, with full public understanding that energy may cost more. Consumers should accept whatever extra cost is involved because of the assurance steam plants give of more electricity.

[From The Dalles Chronicle, The Dalles, Oreg., July 17, 1951]

FUEL-BURNING PLANTS

States and regions vary widely in their natural resources and the demands made on them. These differences, together with the economic problems they raise, have a great influence on feasibility of projects such as those which Representative Henry M. Jackson is proposing.

The Washington Congressman has introduced legislation to build eight steam- and gas-driven electric generating plants in the Northwest. There would be three 100,000-kilowatt steam plants and five 20,000-kilowatt gas-driven plants at an estimated cost of $60,000,000.

This cost is reasonable by comparison with what it would take to construct hydroelectric dams and powerhouses capable of the same output. In weighing long-term costs of the two methods of generation the difference in the size of the original investments is important. Hydropower obviously is cheaper from an operating standpoint once the plant is put in operation, but in some cases the over-all cost figures favor steam generation.

No such advantage in favor of steam will be found in the plants proposed for the Northwest, for our region is classed as fuel-deficient. Steam power will be expensive power, and the same probably can be said for gas-driven generation unless this region can import large quantities of natural gas at low rates.

Nevertheless, fuel-burning generating stations are needed to firm up the power we are getting from the Northwest grid. Jackson advances the present projects as insurance against disruption of industry which might occur in a low-water year.

The Northwest has experienced several declines in power output as the result of weather extremes. Even high water cuts generation on the Columbia River, as was proved during the 1948 flood when flow was so heavy that much of the head was lost at Bonneville Dam. Frigid weather in early 1950, when many mountain tributaries were frozen tight and the Columbia itself became ice-choked, again reduced generation.

Viewed strictly as a practical measure to help overcome the power shortage, construction of fuel-burning plants would seem to deserve a high-priority rating.

The Northwest imports virtually all its fuel except wood. In the absence of large gas fields, this region can hardly hope to achieve economy of fuel-type

power generation comparable to that of, say, the Texas area. We have some coal resources but they are not well developed.

Petroleum and natural gas account for more than nine-tenths of the fuel supplies of the five far-western States and nearly 97 percent of California's requirements, according to figures presented by the Federal Reserve Bank of San Francisco.

Availability of fuels close at hand has spurred development of new steam-plant capacity in California. These additions to the power supply of that State since the war, including projects scheduled for completion in 1951, are reported to total 1,950,000 kilowatts.

Oregon and Washington are fortunate to have the Nation's foremost power stream, the Columbia. Until its potential is fully developed there will be no need for construction of more than a minimum number of fuel-burning generating stations.

At present, the considerations cited by Jackson appear to be adequate in themselves. Alongside them could be placed another important point: By making the Nortwest grid better able to meet its peak demands the steam and gas plants could probably tide this region over until the new, large Columbia projects go into service without necessity of blocking some of the tributary streams, such as the Deschutes, with small hydro dams.

[From the Seattle Times, August 21, 1951]

USING COAL RESOURCES

Upstream water storage offers one solution of the Pacific Northwest power problem, and perhaps the best on a long-range basis. But many years must elapse before the region can hope to impound enough of the Columbia River's summer flow to meet the power demands of winter months.

Steam generation of electricity, during the months when stream flow and water storage combined are unable to do the job, offers a much more readily available solution.

If modern steam-generating plants are to be established, it is to be hoped that one or more can be designed to take advantage of Washington's coal resources. It would seem reasonable that a coal-fueled plant, if located in the immediate vicinity of the mines, could operate as economically as an oil-fueled plant at tidewater.

In this, as in other prospective operations with coal, future fuel cost obviously are an important factor. What could be more welcome than assurance from John L. Lewis that coal won't be priced out of the competitive field?

[From the Walla Walla Union Bulletin, Walla Walla, Wash., July 18, 1951]

STEAM POWER PLANTS

Representative Henry Jackson's proposal to Congress that the Federal Government build 400,000 kilowatts of steam power generating plants in the Pacific Northwest will doubtless be assailed as a further step in the "socialization" of the region. But before we made up our minds too definitely on the subject, there are several aspects which should be considered:

1. Additional steam generation is needed in the area. Because of the nature of our hydroelectric power supply, there will always be more power capability in the spring and summer months than in the winter, when water flows are lower and demand for power is at its peak. This situation will be improved when there is more storage available from upstream dams to regularize the flow of water, but it will remain with us to some extent. Steam plants logically should take up the slack by providing stand-by capacity to be used at times of peak demand, thus increasing greatly the firm power supply at comparatively small additional cost.

2. Although in most sections of the country it would be expected that private utilities would build the additional steam capacity, it is unlikely that this will happen in the Pacific Northwest. By its very nature, hydroelectric power is much cheaper here than steam power. If the utilities, which receive the bulk of their power supply from hydro projects, invest large sums in steam plants

they will be unduly penalized by being forced to add the high costs of this stand-by power to their operating expenses. Under the circumstances, no individual utility is going to be very anxious to make such investments.

3. The Pacific Northwest is unique because this is probably the only area, outside of possibly the Tennessee Valley, where the Federal Government has a public utility responsibility. By far the largest percentage of available hydroelectric power in our area is on the major streams, where the multipurpose character of the river-control problem dictates a policy of comprehensive public development rather than piecemeal private development. Thus it is probably inevitable that the Federal Government will be our principal supplier of electric energy.

Under the circumstances, then, there is nothing basically unsound about the construction of steam plants by the Bonneville Power Administration. The plants are needed to firm up the region's power supply, and as a matter of fact they can add 400,000 kilowatts of firm power at considerably less original cost than the equivalent in firm hydro electric power. They will cost more to operate, but will be used only at times when demand is above normal, and thus should not have any great effect on our over-all power costs. And they can be built much more quickly than large dams, an important factor at the present time.

There is, however, one other possibility. If individual utilities do not want to assume the extra cost burden, it is possible that all of the operating utilities, working through the Northwest power pool, might set up a joint project to build stand-by steam plants and distribute the burden equally among themselves. This solution would avoid penalizing any one utility. Whether it could be worked out as a cooperative project of the present public and private members of the power pool is something that we could not answer at the present time.

It seems to us, however, that such an approach should be explored immediately as being preferable to putting all our eggs in the Federal basket. If the project appears to be unfeasible, then we would favor going ahead at once on Jackson's plan.

[From the Portland Oregonian, August 18, 1951]

STEAM PLANTS, A GOOD IDEA

Announcement that Congress will be asked to approve eight auxiliary steam power plants in the Pacific Northwest stirs but a faint echo of the conflict that roared on Capitol Hill 2 years ago when the Administration proposed to build the first peacetime federally constructed steam plant at New Johnsonville, Tenn.

Congressional opponents of the New Johnsonville plant contended that its construction by Government would constitute direct competition with private industry. Federal production of electric energy had long rested on the precedents empowering Congress to appropriate funds for flood control and navigation. Hydroelectric power generated at a flood-control dam was considered to be merely incidental to the primary function and a prudent means of paying off some of the cost of the Federal project. This fanciful reasoning has prevailed in Congress even though the major purpose and effort of Federal developments in the Pacific Northwest and in the Tennessee Valley have revolved around production and marketing.

The struggle against the New Johnsonville plant in 1949 was sparked by private utilities whose dams had been dwarfed by Federal projects. Their charges of socialism gave expression to fears that they were to lose dominance in the other major field of power production—steam. TVA had fallen heir to some private steam plants and had actually been permitted to construct a plant at Watts Bar in the urgent wartime atmosphere of 1942. But the New Johnsonville proposal was the first that contemplated steam plant production as a normal activity of the Federal Government.

Congress settled the issue of the New Johnsonville plant in favor of the Administration, and TVA has gone ahead with the construction of the $60,000,000 structure.

Significantly, spokesmen for private utilities in the Northwest have not opposed Bonneville Power Administration plans for the steam plants. On the contrary, James A. Polhemus, president of Portland General Electric, commented in April that auxiliary steam plants would "stabilize the BPA system, save investment in transmission lines from distant hydroelectric projects and reduce line losses."

This page feels that the proposed plants are an essential and sensible addition to the Bonneville system in the Northwest. The three major plants—100,000 kilowatts each—probably would be located at Coos Bay, Longview and on the Olympic Peninsula. These are power load centers to which transmission now results in a substantial loss of power. In addition the steam plants, not dependent upon water flow, can be operated at capacity in critical water periods, thus firming up a substantial part of the hydro-produced kilowatt capacity that cannot be marketed now because it cannot be guaranteed on a year-around basis.

One problem that must be met: The supply of fuel. High cost of steam generation could well force low hydroelectric rates upward when pooled in the Northwest system. Coal is a high-cost fuel and not plentiful in the Northwest. Many steam plants have turned to oil, but that, too, presents a transportation problem. Sawdust, available in quantity, is not an efficient source of steam plant energy. Lowest-cost steam plant fuel now in use is natural gas, which the Northwest may have in bulk some day. It is to be hoped that the Northwest's steam plants, when constructed can make use of natural gas.

[From the Longview Daily News, Wednesday, July 18, 1951]

(An editorial explaining need for auxiliary generation)

NORTHWEST SHOULD GET BEHIND EFFORT TO BUILD STEAM PLANTS

The Northwest should get behind the program to build steam plants to supplement hydroelectric generation facilities. Such plants would benefit the region in a way that can be easily understood.

The output capacity of hydro plants rises and falls with the level of the rivers. Thus during certain periods they can produce more electricity that at others. A large part of the power they produce in high-water periods is called interruptible. That is, it lasts only so long as the water is there to turn the generators. Then it has to be interrupted—turned off.

Interruptible power is unsatisfactory to most kinds of industry—especially to aluminum and other electrometallurgical plants which operate on a continuous production basis. But interruptible power could be made firm power by having steam plants to start up when the rivers are low.

This week Representative Henry Jackson introduced a bill in Congress authorizing eight steam plants capable of generating 400,000 kilowatts at a total cost of $60 million. One of them almost certainly would be built in Longview. "If we get that passed," Jackson commented, "we'll get the money for the project without much difficulty." But he predicted a tough fight, recalling the battle in the Eightieth Congress over similar legislation for a TVA steam plant.

The opposition can be expected to come from the same ones who as a matter of principle oppose all Federal power projects.

At the last meeting of the Washington State Industrial Development Council Dr. Paul Raver, Administrator of the Bonneville Administration, explained the need for auxiliary steam power. He said Governor Langlie was greatly interested in the problem. Dr. Raver said he had indicated to the governor that Bonneville was willing to enter into some kind of a contract with the State under which Bonneville would deliver to the State all the interruptible power the State could firm up with steam plants.

Bonneville doesn't particularly care who builds the steam plants—the Federal Government, the State or private power companies. Raver says frankly he isn't anxious to have the additional work of managing them if they should be added to the Bonneville system.

The fact that Jackson is introducing a bill in an attempt to get the Federal Government to finance the steam plants is merely an indication that this is considered the most logical way to proceed. But if Congress balks, there might be another way to obtain the necessary financing. The State has the authority to go into the power business, and if the steam-plant bill fails in Congress, now might be the time to consider that possibility seriously.

[From the Columbia Basin News, Saturday, July 28, 1951]

STEAM POWER PLANTS

The proposal asking Congress to approve eight auxiliary steam power plants in the Pacific Northwest is a necessary and wise addition to the Bonneville system. Although some conflict may be raised over the proposal, it appears likely that it will receive the support of a wide majority of the Congressmen.

Some indication of the criticism the measure may receive stems from recollection of the battle that raged 2 years ago when construction of the first peacetime steam plant at New Johnsonville, Tenn., was proposed. At that time, the cry of "socialization" was raised, opponents contending that the project would represent competition with private industry. Congress settled the issue in favor of the administration proposal and TVA went ahead with the project, the cost of which is estimated at $60,000,000.

Now, a similiar proposal has been suggested for the Northwest, but, significantly, the opposition raised by public utilities in the Tennessee issue has not been raised over the current proposal. On the contrary, notes the Portland Oregonian, James A. Polhemus, president of Portland General Electric, commented in April that auxiliary steam plants would "stabilize the BPA system, save investment in transmission lines from distant hydroelectric projects and reduce line losses."

The three major plants proposed—100,000 kilowatts each—would be located, probably, at Coos Bay, Longview, and on the Olympic Peninsula. The Oregonian pointed out:

"These are power load centers to which transmission now results in a substantial loss of power. In addition the steam plants, not dependent upon water flow, can be operated at capacity in critical water periods, thus firming up a substantial part of the hydro-produced kilowatt capacity that cannot be marketed now because it cannot be guaranteed on a year-around basis."

Few objections indeed have been raised to the proposal, submitted by Representative Henry Jackson, because the need of additional steam generating is widely recognized. Steam plants would logically take up the slack between water flows by providing stand-by capacity to be used at times of peak demand.

Although they will cost more to operate they will be used only at times when the demand is above normal and thus should not have any great effect on overall power costs. And they can be built quickly.

The Walla Walla Bulletin points out, as well:

"The Pacific Northwest is unique because this is probably the only area, outside of possibly the Tennessee Valley, where the Federal Government has a public-utility responsibility. By far the largest percentage of available hydroelectric power in our area is on the major streams, where the multipurpose character of the river-control problem dictates a policy of comprehensive public development rather than piecemeal private development. Thus it is probably inevitable that the Federal Government will be our principal supplier of electric energy."

However, it has been explained, the problem of the fuel supply must be met. The Oregonian observed:

"High cost of steam generation could well force low hydroelectric rates upward when pooled in the Northwest system. Coal is a high-cost fuel and not plentiful in the Northwest. Many steam plants have turned to oil, but that, too, presents a transportation problem. Sawdust, available in quantity, is not an efficient source of steam plant energy. Lowest-cost steam plant fuel now in use is natural gas, which the Northwest may have in bulk some day. It is to be hoped that the Northwest's steam plants when constructed, can make use of natural gas."

SEATTLE, WASH., *September 26, 1951.*

Hon. HENRY M. JACKSON,
Member of Congress, House Office Building, Washington, D. C.:

We heartily endorse H. R. 4963, providing for steam plants and hope Congress will approve this means of firming up our power supply.

HENRY CARTENSEN,
Master, Washington State Grange.

LONGVIEW, WASH., *September 26, 1951.*

Congressman HENRY M. JACKSON,
House Office Building, Washington, D. C.:

We urge full consideration adoption H. R. 4963 for construction steam generating plants. Such construction would help relieve Northwest power shortage.

F. EUGENE CRUMB,
Manager, Longview Chamber of Commerce.

LONGVIEW, WASH., *September 26, 1951.*

Representative HENRY M. JACKSON,
House Public Works Committee, Washington, D. C.:

House bill 4963 is plain and simple common sense. We can anticipate industrial expansion in an area where electrical power can be guaranteed. There could be any number of years of minimum rainfall.

J. SOMERS,
Managing Director, The Merk, Inc.

KALAMA, WASH., *September 26, 1951.*

Congressman HENRY M. JACKSON,
Washington, D. C.:

Urgently urge passing of House Bill No. 4963 to relieve critical power situation in Pacific Northwest.

KALAMA CHAMBER OF COMMERCE,
L. R. RUTH, *President.*
FRANK JAEGER, *Secretary.*

Mr. JACKSON. I would also like to include a statement by the Honorable Charles W. Hodde, of the Washington State House of Representatives. He was in the city last week. He was unable to stay over for this hearing and desired that this statement be included in the record at this time.

The CHAIRMAN. Without objection, it may be included in the record.

(The statement is as follows:)

STATEMENT BY THE HONORABLE CHARLES HODDE, SPEAKER OF WASHINGTON STATE HOUSE OF REPRESENTATIVES, IN SUPPORT OF H. R. 4963

The question of steam plants to firm up hydro power in the Northwest has been before the Washington State Legislature, and the fact that no authorization for such construction was made by the legislature does not indicate at all that the legislature thinks it is unnecessary.

The proposal before the legislature could only have been effective if there could be assurance that a satisfactory contract could be worked out with a number of agencies operating hydro power, and in addition would have required a method of subsidizing the production of steam power through application of State taxes against the citizens of Washington State while the benefits of firming up hydro power would go to all the citizens of the Northwest.

The logical thing would be to have the steam plants owned and operated by the same agencies which are operating the hydro. Bonneville, being the largest single operator of hydro, can, of course, apply the use of steam plants the most effectively. Other agencies with hydro developments in the area now have some steam plants, and it is anticipated that they will continue in their efforts to firm up their own power production, and certainly the federally owned and developed hydro plants should be enabled to do the same thing.

I am wholeheartedly in support of the efforts that will be actuated by passage of this pending legislation. It is my opinion that my views are shared by practically 100 percent of the members of the legislature familiar with the problem.

CHAS. W. HODDE.

Mr. JACKSON. I would also like to include a statement by the Washington Public Utility Districts' Association endorsing the bill.

(The statement is as follows:)

WASHINGTON PUBLIC UTILITY DISTRICTS' ASSOCIATION,
Seattle, Wash., September 24, 1951.

To House of Representatives Public Works Committee:

STATEMENT ENDORSING H. R. 4963, A BILL TO AUTHORIZE THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF CERTAIN FUEL-FIRED ELECTRIC GENERATING PLANTS IN THE PACIFIC NORTHWEST BY THE DEPARTMENT OF INTERIOR AND FURTHER PROPOSING ONE CHANGE THERETO

My name is Ken Billington. I serve as executive secretary to the Washington Public Utility Districts' Association. This association is comprised of membership from the 29 public utility districts of the State of Washington. It is a nonpartisan, nonprofit association. Twenty-one of these districts operate publicly owned electric utilities serving over 180,000 electric customer-owners throughout the State of Washington.

By unanimous vote in meeting of August 7, 1951, held in Wenatchee, Wash., this association endorsed H. R. 4963, a bill to authorize the construction, operation, and maintenance of certain fuel-fired electric generating plants in order to make it possible for the Department of Interior to meet certain defense power requirements in the Pacific Northwest, and for other purposes; and which bill was introduced by Congressman Henry M. Jackson, Representative from the Second Congressional District of the State of Washington.

We favor the enactment of this legislation because of five reasons. They are:

SECTION A

(1) The need for increasing the electric energy resources of this Nation for the defense effort.

(2) The critical power shortage now faced by the Pacific Northwest.

(3) The public utility responsibility of the Federal Government to the people of the Northwest.

(4) The need of such plants from an engineering standpoint of an integrated and well-balanced Federal electric utility operation.

(5) The correctness and feasibility of use of Federal loan funds to the Northwest for construction of this type Federal project.

SECTION B

We would propose one change in the present bill pertaining to the last sentence of paragraph (d) under section 14.

SECTION C

We would cite certain views regarding the relationship of these fuel-fired electric generating plants to the development of hydroelectric facilities in the Pacific Northwest.

With your permission we wish to treat each reason for endorsement, the proposed change, and conclusion separately.

Section A (1): Basic endorsement for the building of fuel-fired electric generating plants in the Northwest is the defense effort. Everyone in the Nation is cognizant of the tremendous build-up needed in our economy to provide this Nation armed strength by which to either forestall open war or to defend ourselves in the event of war. Every region in the Nation is participating to the fullest extent in this effort. As such, development of our Nation's energy resources must be extended as quickly and as fully as possible. Here in the Northwest the basic natural energy resource is hydroelectric power. As such, all haste is necessary to develop such resources through the construction of hydroelectric projects. Yet in the Northwest today on the basis of present hydroelectric development it is to be found that a substantial portion of the hydroelectric power now available must be termed interruptible; that is, available without guaranties of continuance due to the fluctuation of stream flow. This amounts in excess of 300,000 kilowatts, or nearly one-third of the amount of energy now used in the aluminum and magnesium defense production located in the Northwest. The construction of fuel-fired generating plants would permit this hydro energy to be delivered on a firm basis and thereby greatly bolster the Northwest's contribution to the Nation's defense effort.

Section A (2): In the Pacific Northwest we are faced with a critical water year which has already made it necessary to curtail some aluminum production. Defense Electric Power Administration has issued a curtailment directive which, under critical water conditions, will require a cut-back in this region in the use of electric energy of over 600,000 average kilowatt-hours. Present forecasts of energy resources versus power loads indicate that this danger will continue in lessening degree until 1954. Not only will this power curtailment involve a brown-out of this area, but there will be actual industrial curtailment. This means unemployment in this area, but of as great importance is that much raw material for eastern and southern manufacture will also be involved in Northwest power curtailments. The closure of one pot line of aluminum in the Northwest does not involve much unemployment in the Northwest, but it could mean considerable unemployment in the fabrication plants for both civil and defense needs in the East and South. The same is true of the lumber industry, the pulp industry, etc. The erection of fuel-fired electric generating plants cannot be accomplished quick enough to alleviate this year's problem. However, if speedy authorization and action by Congress is invoked, a certain measure of relief could be provided for future years against such hardship and danger. The relative short time needed to build the fuel-fired plants as compared to any hydro plants is one of the strongest supports for this bill.

Section A (3): The Pacific Northwest is unique as regards river development. Major streams, the Columbia and Snake Rivers, are suitable only for multipurpose development; and, as such, development of these streams is a necessary Federal activity. The uniqueness of this region makes it mandatory for the Federal Government to be in the power business. This in turn, from the viewpoint of the electric consumer, extends to the Federal Government certain obligations of public utility responsibility which pertains to any electric utility, public or private. Any utility, Federal, public, or private, must be ready to render service to all who come through adequate facilities with reasonable rates. As such, the Federal Government should, under this public utility responsibility, keep energy resources ahead of anticipated power loads. As fuel-fired generating plants are essential to any well-balanced utility operation, so should the Federal Government provide for such plants to help maintain the Federal Government's public utility responsibility.

Section A (4): From an engineering viewpoint the integration of fuel-fired generation with basic hydroelectric development is proper to balance power loads in any electric system. The Federal Government, by virtue of its ownership and operation of the large hydroelectric projects in the Northwest, should have energy from fuel-fired electric plants to round out the energy production of the hydro plants. Further, use of fuel-fired plants to serve peak loads on a system is the practical manner. Past experience of both publicly and privately owned utilities bears this out. We would complement the formation of this bill without stipulation of actual plant site location, feeling that this matter should be left to the discretion of proper system integration engineering.

Section A (5): In viewing these proposed plants from a financial standpoint, investigation shows such construction as being financially feasible by virtue of the greater amount of firm energy thus acquired and the savings in transmission-line cost. The repayment of the cost of the plants, the operation and maintenance thereto, and the payment of proper interest are very comparable to the present costs of the present Federal hydro system when integrated with such system. In considering the financial aspects of these plants, we respectfully call to your attention that investment of American tax dollars in electric facilities in the Pacific Northwest is not only a proper act of the Federal Government but also very profitable to the entire Nation's economy. Repayment to the Federal Government of tax moneys capitalized in the present electric plants are substantially in advance of the pay-out schedules. Additionally, all money necessary for the operation and maintenance thereto is being returned. Proper interest is being paid on the capital investment. These Northwest projects are of the type which pay their own way. The electric users of the Pacific Northwest are paying for the Federal generating plants on the basis that the Federal Government is acting as a banker as in any sound investment. Statistics show on a pay-out basis that as of June 30, 1951, there is a Federal capital investment for power in Grand Coulee Dam, Bonneville Dam, and the Bonneville Power Administration transmission lines of $395.3 million. Ninety-four million, eight hundred thousand dollars, or 24 percent has been repaid—this at a time when only 14 percent of the pay-back period has elapsed, and this after deduction of operation, maintenance, and interest costs. The fuel-fired generating

plants will be in the same category and repaid by the people of the Northwest by means of proper rates charged for the electricity generated.

Section B: We would desire one change in the proposed bill. At present the Federal Power Commission has the right of review and approval of rates on sale of electric energy from certain Federal installations as established by the Administrator of the Bonneville Power Administration or the Secretary of Interior. The last sentence of paragraph (d) under section 14 reads as follows: "Rates fixed by the Secretary pursuant to this subsection or for power to be disposed of pursuant to subsection (b) of this section shall become effective without further confirmation or approval."

The present method of rate surveillance by the Federal Power Commission should not be removed. This bill should be changed to retain the present status of rate surveillance by the Federal Power Commission as now provided in the Bonneville Act. We are cognizant that certain projects now integrated in the Bonneville Power's transmission system which are operated by the Reclamation Bureau of the Interior Department have rates established by the Secretary without confirmation or approval of FPC. There is merit to the argument that rate establishment and approval should be uniform for all projects in the Columbia Basin system. However, we feel in all Government activity that a proper system of checks and balances should be maintained. Further, this matter of rate surveillance is of greater importance and should be treated as a separate item in different legislation. We would ask your consideration of changing H. R. 4963 to retain the present status quo of rate establishment, confirmation, and approval as now outlined in the present Bonneville Act.

Section C: In conclusion may we state that fuel-fired generating plants cannot be accepted as a substitute for the development of hydroelectric power in the Pacific Northwest, but that such fuel-fired electric-generating plants are (1) essential to the defense effort due to the short time needed to complete such plants; (2) they are needed to balance the generation supply of a well-established Federal hydroelectric system and thereby assist maintaining the Federal Government's public utility responsibility to this region; and (3) they should be built as quickly as possible, being financially correct and feasible.

We urge favorable committee action on H. R. 4963.

Respectfully submitted.

WASHINGTON PUBLIC UTILITY DISTRICTS' ASSOCIATION,
KEN BILLINGTON, *Executive Secretary.*

Mr. JACKSON. Mr. Chairman, Senator Magnuson wanted to be here this morning. However, he is tied up in a meeting of the Senate Judiciary Committee and therefore is unable to be here. I would like to include in the record at this point a statement by Senator Magnuson which he would have given in person had he been here, together with two editorials included in his statement.

The CHAIRMAN. Without objection, they will be included in the record.

(The statement and editorial referred to are as follows:)

STATEMENT OF HON. WARREN G. MAGNUSON, UNITED STATES SENATOR FROM THE STATE OF WASHINGTON, IN SUPPORT OF JACKSON PACIFIC NORTHWEST STEAM PLANT BILL, H. R. 4963, AND ITS COMPANION BILL, S. 2161

Mr. Chairman, I am here today to urge immediate and favorable action on H. R. 4963, a bill introduced by Congressman Henry M. Jackson, authorizing construction of steam plants in the Pacific Northwest. My remarks will be brief because details of this proposal will be presented in full by Government witnesses. The Jackson bill and the companion bill I have introduced in the Senate authorize the Secretary of Interior to construct eight steam electric-generating plants in the Pacific Northwest—three with a rated capacity of approximately 100,000 kilowatts each and five with a rated capacity not in excess of 20,000 kilowatts each.

The Columbia River and its tributaries possess the greatest hydroelectric potential of any river system in the world. Fully developed, water flowing down these streams will generate over 30,000,000 kilowatts. This is equivalent

to more than 50 percent of the hydroelectric potential in the entire United States.

Great progress toward harnessing the Columbia River system has been made in the last 15 years. Unfortunately, this progress has not been sufficiently aggressive or accelerated to meet the demands of the area. Defense needs, superimposed upon normal growth, have produced an extremely acute power shortage. Two equally important steps must be taken now to correct the situation. First, construction of Albeni Falls, McNary, and Chief Joseph Dams must be pushed forward at top speed. In addition, appropriations to initiate construction on The Dalles and Ice Harbor Dams must be provided. We in the Northwest are watching with prayerful intent the meeting of Senate and House conferees on the Army civil functions appropriations bill. We hope our prayers will register on the House conferees to the end that funds will be voted to achieve the objectives I have just cited.

The second immediate step demanded by the power shortage in the area is favorable action on the Jackson bill now before you.

Before addressing myself specifically to the merits of this bill, let me review quickly recent events in the Pacific Northwest. On September 17, Defense Electric Power Administration issued DEPA Order EO 4. This order creates the machinery for rationing power in Oregon, Washington, Idaho, and western Montana. Under the order an administrator has been appointed. First action was to cut some 240,000 kilowatts of so-called interruptible power off the line. Additional cuts will become necessary unless normal rains occur within the next few weeks.

For the last 5 years I have been warning the Congress of a potential brown-out in the Northwest. All Senators and Congressmen from the area—Republicans and Democrats alike—have joined in this chorus.

What we feared would happen has now occurred—the brown-out is here and for the present season only Mother Nature can provide a solution. For the future, however, you men on this committee and conscientious men serving on other committees of the Congress have the power—and I might add, the responsibility—to provide a remedy.

On Saturday, September 22, Defense Mobilizer Charles Wilson sent a telegram to the Big-Three aluminum producers, asking them to explore the possibility of moving a part of their production out of the Northwest. Aluminum is indispensable to the defense effort. Aluminum means planes, bazookas, containers, and a host of other articles essential to our national security.

Arguments as to the merits of the program implied in Mr. Wilson's action have no place in this hearing. Therefore, I merely state that in my judgment any proposal to relocate aluminum facilities is completely impractical; first, because of the time required to complete such a program; and second, because there is no place to go—there is no place in the country which possesses a sufficient surplus of power to service these plants.

The solution to the crisis which perturbs Mr. Wilson is the same solution you have before you today—namely, the Jackson bill. Solve the Northwest power problem and you solve the aluminum crisis.

I turn now to the merits of the bill itself. Competent engineers will tell you that any hydroelectric system needs a percentage of steam generation to firm up power which is lost, on a firm basis, due to low water conditions during a portion of each year. Let me give you an example. During flood stage the Snake River flows at the rate of some 80,000 to 90,000 cubic feet per second. During low-water season, the stream flow drops to as little as 10,000 cubic feet per second.

Unless a dam such as the proposed Hells Canyon project is constructed to impound a portion of this spring runoff for release during the low-water period, firm energy on the Snake River would have to be computed on the basis of the lower of these figures—10,000 cubic feet per second.

When this same principle is applied to the entire Columbia River system, the need for stand-by steam generation to fill the gap during the few months of low water becomes readily apparent. Construction of steam plants in the Northwest, therefore, is a sound investment—both to meet the present emergency and for the long-run stability of the Northwest grid system.

There is another factor that makes the steam plant proposal economically desirable. Most of the hydroelectric power projects under construction and scheduled in the Northwest are located inland on the main stems of the Columbia and Snake Rivers. The chief population centers in the area are on the

coast. This means that electric transmission lines must be built from points of generation to the main load centers and some transmission losses inevitably occur. If steam plants are located at the coastal ends of these transmission lines and relatively near major load centers, line and voltage losses can be greatly reduced. Hence, steam plants are desirable and necessary supplements to hydroelectric generation.

Steam generation—power generated by steam plants—is always higher cost electricity than that produced by falling water. The ratio of steam power to hydroelectric power in the Northwest by volume, however, is such that these higher costs can be averaged with the low-cost water power and still give us a rate attractive to light metals and other industries, and to commercial and domestic users.

The investment in steam plants will be returned to the Federal Government. The plants will be reimbursable just as our dams are reimbursable.

There is an ample quantity of coal in the Northwest to fire these steam plants. In addition, the possibility of using wood waste is being explored. A combination of the two may prove feasible from an economic standpoint.

In conclusion, I reiterate—the power shortage in the Northwest is critical. It is no longer merely a regional problem, it has become a national problem. Our ability to meet the defense demands is contingent upon our ability to expand basic and fabricating industries. Our ability to expand these industries in turn is directly dependent upon power.

When we are talking about the Northwest power shortage, therefore, or when we are talking about the national power shortage, we are talking not merely about lights in the homes, in the stores, and on the farms. We are talking about planes, tanks, guns, and ships—all of those things indispensable to national strength and freedom.

I sincerely hope this committee will report favorably on the Jackson bill and will join us from the Northwest in obtaining congressional enactment before the close of the present session.

[From the Sunday Oregonian, Sunday, September 2, 1951]

STEAM PLANTS VERSUS BROWN-OUTS

The 314,000-kilowatt power cut-back which will probably be forced upon Pacific Northwest metal and chemical plants this winter is almost precisely equal to the capacity of three large steam plants now awaiting congressional approval. The Bonneville Power Administration has informed industries with interruptible power contracts that prospective low water in the Columbia will force a cut-back within a month. The steam plant measure, on which hearings will be held in September or October, proposes three 100,000-kilowatt units with estimated peak capabilities totaling 330,000 kilowatts.

In practice the projected steam plants, when and if constructed, would be used in extremely low water years to meet contracts for firm power. For the Northwest energy deficiency in such a year would be almost twice the total of the interruptible loads, leaving a possibility that almost 300,000 kilowatts must be taken from private utilities, municipalities, and other Bonneville customers. Some such brown-out in addition to the interruptible power cut-back may be necessary this year unless the rains come. The Defense Electric Power Administration will make the decision on where cuts will be made. And these restrictions will undoubtedly have more direct effect upon the consumer than the reduction in loads to the big industrial customers.

The Northwest needs the new steam plants and the additional 100,000-kilowatt capacity of five small gas-driven turbines which would be authorized by the same bill. But even should congressional action come in this session, the new power would not be available until the winter of 1955–56. A few more months' delay in Federal action would set completion of the steam plants back yet another year to 1956–57. Meanwhile the Northwest must expect to live under the threat of winter brown-outs except in years of peak flow in the Columbia. As the hydroelectric development of the river proceeds, the kilowatt deficiency in low-water years will grow, and the need for firming up through stand-by steam plants will increase proportionately. Now is the time for Congress to take the first steps toward giving the Columbia Basin brown-out insurance.

UNITED STATES WILL TRY RAINMAKING IN POWER CRISIS—DROUGHT IN NORTHWEST MENACES PRODUCTION OF DEFENSE ALUMINUM

The Government announced yesterday it was turning to rainmaking in an effort to break the Pacific Northwest drought, which has curtailed the power supply for aluminum production.

Under Secretary of the Interior Richard D. Searles revealed that rainmakers would start seeding clouds over Oregon and Washington this week.

He said about 61 percent of the area which feeds water into the Bonneville Dam Reservoir would be seeded.

"Rainmaking is not a sure cure," Searles said, but added: "Personally, I hold great hopes for success."

Some aluminum production lines already have been shut down due to the shortage. If water conditions do not improve, Searles said, "cuts in other essential activities may be necessary."

After a conference with Henry J. Kaiser, west coast industrialist, Defense Mobilizer Charles E. Wilson told reporters that "Mr. Kaiser and I see eye to eye on the necessity of doing something drastic."

Kaiser told reporters he was "certain the removal of the aluminum facilities from the Pacific Northwest could be avoided"—but only if the people there "make every sacrifice necessary."

Kaiser gave Wilson a 28-page report which recommended immediate utilization of ships as floating power plants and Diesel electric locomotives as stand-by power producers.

The CHAIRMAN. Mr. Jackson, Mr. Holmes, a Member of Congress from the State of Washington, tells me that he will have to appear before the Ways and Means Committee and he will only take a few minutes here to testify, if you are ready for him.

Mr. JACKSON. Yes.

The CHAIRMAN. I believe Mr. Holmes and Mr. Horan desire to testify, and there may be some other Members.

Mr. HORAN. Mr. Chairman, the meeting of the Appropriations Committee is at 11:45. I would like to be heard briefly.

The CHAIRMAN. Do you want to be heard before Mr. Holmes?

Mr. HORAN. No, after Mr. Holmes.

Mr. HOLMES. I will be very brief.

Mr. JACKSON. I will be glad to submit myself to cross-examination by the committee after these other gentlemen have had an opportunity to make their statements.

Mr. DEMPSEY. What authorization does the bill call for?

Mr. JACKSON. The bill calls for an authorization of $60,000,000. The three large plants that will produce 100,000 kilowatts are estimated to cost $15 million each, or a total of $45 million, and the five 20,000-kilowatt plants are estimated to cost $3 million each, or a total of $15 million, making a grand total of $60,000,000, which is proposed in this authorization.

The CHAIRMAN. How may kilowatts will that be altogether?

Mr. JACKSON. Four hundred thousand, Mr. Chairman.

Mr. MACK. That would be a cost of about $150 a kilowatt for the steam plants for the installed capacity?

Mr. JACKSON. If it figures out that way arithmetically. It is quite obvious that the cost of the construction of steam is much higher than hydro.

Mr. DONDERO. Mr. Chairman, may I interrupt to suggest that, inasmuch as two Members of Congress have indicated they would like to testify, they be given a few minutes and then come back to Mr. Jackson?

The CHAIRMAN. I quite agree. Mr. Holmes.

STATEMENT OF HON. HAL HOLMES, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. HOLMES. Thank you very much for this courtesy. We are in executive session at Ways and Means, and I will have to go back. Thank you also, Mr. Dondero.

Mr. Chairman, I wish to thank the committee for the opportunity to appear to express my interest in H. R. 4963. This legislation was conceived for the purpose of authorizing the construction, operation, and maintenance of certain fuel-fired electric generating plants in the Pacific Northwest. Its purpose is to aid in the disposition of power from Bonneville, Grand Coulee, and other Federal hydroelectric projects in the Pacific Northwest. It likewise would increase the amount of hydroelectric energy which can be marketed from existing and authorized projects and, in turn, firm up the power derived from the hydroelectric projects during periods of low water and seasonal decrease flow in the Columbia and its tributaries. This bill provides for the construction of three fuel-fired electric generating plants each having a rated capacity of approximately 100,000 kilowatts, and also five fuel-fired electric generating plants each having a rated capacity of not in excess of 20,000 kilowatts.

As you gentlemen are well aware of the national importance of the Pacific Northwest and the use of its power in the defense program, I wish to emphasize that if it had not been for the Northwest power during World War II we never would have been able to have produced the aluminum necessary for the huge aircraft production that was accomplished, let alone the atomic bomb.

We are suffering from a power shortage in the Northwest now; in fact a brown-out program was instituted by the Defense Power Administration on September 17.

We have fuels available in the Northwest to generate this power and an abundant supply of clear water for steam generating purposes. We have coal of good quality and supply which would not interfere with great demands placed upon the oil supply of the Nation, and can produce fuel-generated electricity at very low cost. The committee should likewise be appraised of the fact that the Hanford Engineer Works, located in eastern Washington, which manufactures all the plutonium for the atomic bomb, uses a terrfic amount of power which must be maintained at all times.

I submit to your committee my firm request that you give your most considered attention to this legislation because of its extreme importance in the over-all defense picture and the manufacture of light metals which, in the raw, are available in huge quantities throughout the Pacific Northwest and in the State of Washington.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Mr. Horan.

STATEMENT OF HON. WALT HORAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. HORAN. Mr. Chairman, I have a very brief statement here. My purpose in appearing here is to support my colleague from Washington, Mr. Jackson, in his bill. I would like to submit this statement for the record.

I would like to point out that the present emergency in our area will be eventually met by the dams that are coming in now and are being built at Chief Joseph in my district, at Hungry Horse in Montana, at Albeni Falls in Idaho, and elsewhere along the Columbia River. We will have an additional 100,000 kilowatts by virtue of the down-river benefits with the completion of Albeni Falls by August 1952.

We do have a precedent for the use of stand-by steam plants in the Pacific Northwest. Long before Grand Coulee was begun, the city of Tacoma had a power shortage and a brown-out. At that time we had two aircraft carriers which were electrically driven and generated within the hold of the ship about 184,000 horsepower each, I believe. In 1929 or 1930, the aircraft carrier *Lexington* tied up at the docks in Tacoma and helped through that crisis. Both the *Lexington* and the *Saratoga*, the only ships of their kind, are now on the bottom of the sea. Otherwise, we might have one of those ships out there now helping in this present emergency which we need to meet.

This emergency, of course, has pinpointed the need for stand-by plants to supplement Columbia River power until we have made further progress in the harnessing of that great river.

I do hope that this committee will give serious consideration to this proposal. I know that there are men in this room who can testify on the technical angles and answer every question of this committee. I can speak, I am sure, for all members from the Columbia River drainage area, from Montana, Oregon, Washington, and Idaho, when I say that they are all interested in the progressive and sound development of this river.

I want to thank the committee for this opportunity.

The CHAIRMAN. Thank you.

(The prepared statement submitted by Mr. Horan is as follows:)

STATEMENT BY HON. WALT HORAN, MEMBER OF CONGRESS, FIFTH DISTRICT, WASHINGTON

I most sincerely appreciate the privilege accorded me by the chairman and the members of the Committee on Public Works of the House of Representatives in permitting me to make this statement on behalf of H. R. 4963, a bill introduced by my colleague, the Honorable Henry M. Jackson, State of Washington, to authorize the construction, operation, and maintenance of certain fuel-fired electric-generating plants in order to make it possible for the Department of the Interior to meet certain defense power requirements in the Pacific Northwest and for other purposes.

In these troublous times, it is customary for proponents of every type of project, with the most ingenious of pretexts, to attempt to cite the project as "necessary to our defense effort." This I shall not endeavor to do, since in the case of H. R. 4963 the connection with the production of critical defense materials will be obvious to the committee.

It may seem strange to the members of the committee that in the drainage area of the Columbia River, potentially the greatest source of hydroelectric energy in the world, a shortage of power should occur. I submit, however, that under the orderly plan of development originally contemplated for the area such a shortage would in all probability never have materialized. The appearance of the Korean war upon the world scene, and the consequent critical need for light metals, was the factor that led to the stretching of the power supply of the Pacific Northwest to the absolute limit. In this, those in charge of our defense production took a calculated risk in the matter of the possibility of a low-water year during the period that new sources of hydoelectric power were being developed.

As occasionally happens under such circumstances, the eventuality upon which the risk was based came into being. We have had an unusually dry summer in

the Pacific Northwest, and this resulted in a more than normal shrinkage in the amount of water stored in upstream reservoirs and in the flow of the rivers of the region. It was this condition that precipitated the cancellation of the power furnished to the aluminum potlines of the Pacific Northwest under interruptible-power contracts, and the resultant shut-down of essential aluminum production.

At this point, permit me to emphasize that the normal advent of the fall rains would have rendered this action unnecessary. Had the usual rainfall occurred, sufficient power would still have been available for the uninterruped operation of the potlines. And here, I must stress, also, the fact that at any time we may have a general rainfall throughout the area, which will make it possible to again provide the necessary power for full aluminum production. Thus, the present situation with relation to power and aluminum prouction must be considered of only the most temporary and emergent nature.

The defense aspects presented in the hydoelectric power problem in the Pacific Northwest are amply substantiated in the recent brown-out order imposed upon the area by the Defense Electric Power Administration to conserve power for the production of light metals and by the action attributed to Mr. Charles E. Wilson, Director of the Office of Defense Mobilization, in exploring the possibility of removal of some of the aluminum potlines in the Pacific Northwest to other sections of the country where, it was assumed, sufficient power would be available to operate them. This possibility can be proved to be infeasible from every practical standpoint, and I have no doubt that evidence to support this contention will be placed before the committee by other witnesses.

The one clear fact that demonstrates the infeasibility of such a procedure, however, is that nowhere in the Nation is there sufficient surplus power available to operate these potlines. In support of this statement, I call the attention of the committee to the following article published in the Christian Science Monitor of September 20, 1951, in which Mr. Thomas E. Marburger, director of the Materials and Equipment Division of the Defense Electric Power Administration, predicts a Nation-wide shortage of 4,000,000 kilowatts by the end of 1953:

"ABSECON, N. J.—A Government power expert said the Nation faces such a critical power shortage that 'some industrial demands will be without electric service' by the end of this year.

"Thomas E. Marburger said that furthermore the power shortage probably will become increasingly acute until there is 'a staggering shortage of 4,000,000 kilowatts by the end of 1953.'

"Mr. Marburger is Director of the Materials and Equipment Division of the Defense Electric Power Administration. He made the statement in a speech prepared for the Valve Manufacturers Association.

"He attributed the mounting electrical shortage to increased industrial, commercial, and domestic demands since the outbreak of the Korean war and to materials shortages. These factors, Mr. Marburger said, have been steadily whittling down the margin of power reserve which electric utilities try to maintain to protect their customers.

"'By the end of 1951,' he said, 'the operating margins will be decreased below the danger point and some industrial demands will be without electric service.'

"Mr. Marburger listed several areas in which industrial customers already are having their electrical service interrupted from time to time or are likely to experience interruptions soon. Among those areas were the steel-making section of Pittsburgh, the Pacific Northwest, the Carolinas, and the Gulf coast.

"'At present, we face critical power shortages,' he said. 'At no time during World War II did the electric-power supply picture look so threatening as it now appears for the fall and winter of 1952.'

"He said reduced material allotments for the electric industry probably will leave the Nation with a shortage of at least 1,500,000 kilowatts in 1952 and a further shortage of another 2,500,000 kilowatts in 1953.

"'Add those figures together,' he said, 'and the result is a staggering shortage of 4,000,000 kilowatts by the end of 1953.'

Thus, we see the vital necessity for the steam plans contemplated in H. R. 4963 to assure the uninterrupted production of the light metals so sorely needed now and throughout the next few years.

The shut-down of aluminum potlines in the Pacific Northwest, temporary though it may be, points inescapably to the wisdom of

firming up sufficient power through the operation of steam plants to prevent any such interruption of production in the future. Serious though this shut-down is, the possibility of catastrophic consequences, should such a cessation of operations occur under circumstances of an even more critical nature, presents a situation that we should anticipate and provide assurance against now, while we can still do so. Eventually, we in the Pacific Northwest will have abundant hydroelectric power—enough to maintain all the present and contemplated potlines, and, also, all the related industries that will spring up around them. Chief Joseph Dam, McNary Dam, and Hungry Horse Dam are under construction. Albeni Falls Dam is now being built, and future construction lies in the hands of the conferees on the Army civil-functions appropriation bill. I have every confidence that the conferees will approve it, since it provides the quickest source of additional power for our area. Other dams will be built to fully develop the tremendous hydroelectric potentialities of the Columbia River watershed.

In the meantime, however, before the additional power will become available from these mammoth developments, there remains a period when our supply of electrical energy in the Pacific Northwest will be strained to the utmost. During this period it is essential that the steam plants provided for in H. R. 4963 be standing by to take up the slack in the supply of power between normal and low-water periods.

I most earnestly bespeak the committee's favorable consideration and report on this legislation.

STATEMENT OF HON. THOR C. TOLLEFSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. TOLLEFSON. I appear in support of H. R. 4963, which authorizes the construction of fuel-fired electric-generating plants in the Pacific Northwest.

We are all familiar with the power shortage which now confronts the entire Nation, and especially those portions of it in which critical and defense industries are located. These industries, together with the vast military and defense installations which are now in operation or are in the planning stage, will require an ever-increasing supply of power. The present power supply in the Northwest cannot meet current power needs, nor will they be able to do so for several years to come. Additional power facilities are needed as quickly as they can be constructed. The bill before you points out one way in which those needs can be supplied. The fuel-fired electric plants authorized by this measure can be built in a relatively short period of time.

During this period, when we are engaged in an extensive national-defense program, we will fall far short of our production goals if there are not sufficient power facilities to supply the energy requirements of our industrial plants. Just recently Mr. Wilson, our Director of Defense Mobilization, being concerned about that matter, suggested that some of the aluminum facilities now located in the Northwest be moved elsewhere. Of course, such a proposal would not solve the problem, but Mr. Wilson's suggestion serves to emphasize the seriousness of the situation. The power shortage exists elsewhere in the Nation also. A better and quicker remedy, as far as the alumi-

num situation is concerned, is to be found in the proposal contained in H. R. 4963.

These fuel-fired plants would serve not only to meet as quickly as posisble present needs but would also serve to firm up the power supply of the Northwest in the future. Experience indicates that the hydroelectric power supply is not constant throughout the entire year. When the water supply is short the electric-energy supply falls off. The fuel-operated power plants would, during such periods, fill in the deficiency.

In the defense-production program, there is no material more valuable than aluminum, and nowhere else in the Nation can aluminum be produced cheaper than in the Pacific Northwest. The necessity for firming up power for this industry and others is, of course, obvious.

One of these generating plants, located in the Sixth District of Washington, which I have the honor to represent, and using coal as a fuel, would restore one of our greatest natural resources, in the State to former prominence, and may mean the actual survival of many communities. Power can be generated with coal at a lower cost per kilowatt than with either oil or gas. An unlimited supply of coal of a high quality is available.

I most sincerely urge the committee's favorable consideration and report of this important legislation.

Mr. JACKSON. My colleague, Congressman Mitchell, I know would like to file a statement at this point in the record. He was to be here, but I believe he is tied up in the Rules Committee meeting.

The CHAIRMAN. Without objection, it is so ordered.

(The statement referred to is as follows:)

STATEMENT OF HON. HUGH B. MITCHELL, CONGRESSMAN FROM FIRST DISTRICT, WASHINGTON

I wish to place in the record an endorsement of the bill to construct steam plants and gas turbines in the Pacific Northwest. These plants are needed because they will provide new power capacity to meet the deficiency which exists in our region of the country. The Pacific Northwest has a great asset in the Columbia River system, which could be making even a greater contribution to the military needs of the Nation. The only reason it is making but a portion of the contribution of which it is capable is that the construction of power-generating facilities has been allowed to fall behind schedule.

The Pacific Northwest is faced with both an immediate and a long-range power shortage. The immediate emergency is due to a shortage of water * * * the result of one of the longest dry spells in the history of the region. This emergency must be met by decisive and immediate action by the Secretary of the Interior and the Defense Electric Power Administrator. The proposed steam plants cannot be constructed in sufficient time to meet the current shortage.

However, the construction of steam plants will go far toward insuring the Northwest against future shortage and will, in addition, provide a means by which a far greater share of firm, uninterruptible power can be produced.

The proposed steam plants will add 400,000 kilowatts of new capacity. Virtually all of this new capacity will be used to bolster defense production. The steam plants can be built more rapidly than new hydroelectric dams and powerhouses. They can be brought in and producing power by 1954.

It must be made clear that the construction of these fuel-fired generators will not take the place of additional hydroelectric producing dams. Multipurpose dams on the Columbia River and its tributaries will consistently produce far more electricity more cheaply than will steam plants. In addition, hydroelectric production does not require the expenditure of critical materials, such as oil, for fuel.

Therefore, this proposal which I am here to advocate must still be looked upon as a feature of the long-range development of the Columbia River's power.

The steam plants will be used to supplement the hydro plants. They will make firm the secondary power of the river system. In addition, they will support the transmission system of the Bonneville Power Administration. Construction of the steam and gas turbine plants will save some of the investment that would otherwise have to be made in the future for additional transmission lines.

In considering this matter before the committee, it has occurred to me that the original authority conferred upon BPA by Congress may be already sufficiently broad to give BPA the power to ask for appropriations for steam generating plants, without further authorization. I am informed that a number of able attorneys have delivered opinions to the effect that, in similar circumstances to that in which BPA now finds itself, the authorization for generating plants already exists, subject, of course, to the continuing supervision of Congress under the budget and appropriation process.

The BPA should certainly be vested with authority to do everything that is needed to meet the region's power needs. That this is so is attested by the fact that repayments of past Federal investments are far ahead of schedule. These repayments are being made from revenues after deduction of all operating costs, a large subsidy to irrigation, and interest on the power investment.

The expanded national defense program which became necessary after the beginning of the North Korean aggression imposed additional burdens upon power systems across the Nation. The Northwest power system is particularly heavily loaded since it is in this region that aluminum production is centered. The Northwest is faced with a great challenge. Not only must production of energy be expanded to meet the requirements of the aluminum producers but the demands of the rapidly growing industrial economy of this region must also be satisfied.

Installation of steam generating power plants, within the limits of this bill, will permit the Federal power supply system to meet the growing demands for power in the region with maximum speed and economy. The deficiency in power supply, if the proposed fuel-fired plants are not constructed, will make more serious the grave problems of adequate power supply for national defense in the Pacific Northwest.

Mr. ANGELL. Mr. Chairman, may I ask permission to file a statement?

The CHAIRMAN. Without objection it is so ordered.

(The statement referred to is as follows:)

STATEMENT OF HOMER D. ANGELL, MEMBER OF CONGRESS, THIRD DISTRICT, OREGON

Mr. Chairman and my colleagues, I am deeply interested in the passage of this bill introduced by our colleague, Mr. Jackson, H. R. 4963, which provides for fuel-fired electric power generating plants in conjunction with the operation of Federal hydroelectric plants in the Columbia River area now under the Bonneville Administration.

The growth of the power-development program in the Pacific Northwest is a most interesting one, and, according to recent figures released, shows a steady increase of total power sales from the peak war years of 8,671,316,000 kilowatts with a total revenue of $20,542,484 and an average price per kilowatt-hour of 2.37 mills. For the fiscal year of 1951, ending June 30 of this year, Bonneville sold to all customers 15,079,237,000 kilowatt-hours for a gross revenue of $35,702,461 at the same average per-kilowatt-hour price as in 1944, or at 2.37 mills.

This legislation is not an attempt on the part of the Federal Government to enter into the field of the generation of electric power by steam. Its purpose only is to provide stand-by steam plants to firm up hydro. It is my information, and the evidence before our committee discloses, that all the large private utilities generating hydroelectric power install stand-by steam plants to firm up the power during periods when water power is not available. By doing this it makes the entire project an economical operation and permits a continuous supply of firm power which otherwise would not be available in time of low water or other stoppage in the hydro system.

The Columbia River area has the greatest pool of hydroelectric power of any area in our country, in fact some 40 or 50 percent of the potential hydro power of the Nation is stored in the falling water of the Columbia River and its tributaries. It drains an immense area and does produce a very substantial quantity of firm power throughout the year. But there are certain off seasons such as the one we have just been experiencing due to drought and certain subnormal conditions when water is not available to keep the generators turning to full

capacity and as a result it becomes necessary to have what is called a black-out or a shut-down in so-called interruptible power. Just now, as you know, the Bonneville Administration has found it necessary to advise the large users of power in the area, especially the aluminum companies, that it will be necessary to cut off a portion of their interruptible power, which has been done. This was done on a pro rata basis among the users and is in accordance with agreement with them. These concerns were not taken by surprise but were given ample notice and are in full accord with the action taken to meet the problem. However, to avoid the necessity for such a move in the future and to firm up the hydroelectric power in the area, the technical engineers in charge of the project strongly recommend the installation of these stand-by steam plants to tide over such emergencies so far as possible.

The construction of these plants is an economical move on the part of the Federal Government and will more than repay their cost by making possible the continuous flow of firm power, thereby augmenting the receipts for power in the entire system.

An interesting and factual short statement with respect to the water supply and the effect on the Grand Coulee Dam and the immense water pool behind it is set forth in an article recently appearing in the public press which I include as part of these remarks.

(The article referred to follows:)

"POWER SUPPLY AT GRAND COULEE CONTROLS SITUATION OVER VAST WESTERN EMPIRE

"SEATTLE, September 25.—What's rendering the Pacific Northwest power-shy? Why the talk of brown-outs, moving aluminum plants; if nobody's to blame, what's to blame? And why?

"Here's the picture:

"Columbia River water is the answer. As goes the Columbia so must go your light switches. And Grand Coulee Dam produces approximately half the Pacific Northwest's hydroelectric power.

"The Columbia flow at Grand Coulee fell from 74,000 second-feet (cubic feet per second) on September 14 to 65,200 second-feet September 20, the Bonneville Power Administration reports.

"The consequent loss of power at Grand Coulee—more than 200,000 kilowatts—was enough to extinguish more than 2,000,000 100-watt electric lights.

"That power loss in the 6-day interval was nearly enough to meet the total needs of a city the size of Seattle.

"For instance, Seattle's City Light's load ranges from about 135,000 kilowatts in the early morning hours to 400,000 kilowatts in the peak periods later in the day.

"Columbia River water spreads its effect. After going through the Grand Coulee turbines, it also provides power at the plants at Rock Island near Wenatchee and at Bonneville. So reduced stream flow also effects their output.

"Grand Coulee is the principal power source, however. Each of its 18 generators produces upward of 120,000 kilowatts of electrical energy. That's enough to light up 1,200,000 100-watt light bulbs when there is enough water for a full-scale operation.

"But—on the basis of the September 20 stream flow, Grand Coulee had only enough to operate 13 generators.

"Stream flow is also expected to drop 15,000 to 20,000 second-feet in January, the regular winter slow-up. That's why there is the big water back-up area behind the dam.

"This impounded water will be drawn upon the next 6 or 7 months to supplement the stream flow.

"Engineers say that on the basis of the present rapid decline in stream flow, the storage water will fall far short of what's required to operate all of Grand Coulee's 18 generators.

"So, the stored water will be released gradually to permit as many generators as possible to be operated as long as possible.

"Power officials believe the river will be up to 90,000 second-feet again by next April. Then all the generators will be able to operate around the clock.

"It is possible that water conditions may improve before April 1.

"But the Defense Electric Power Administration laid out its cut-back program on the premise the draw-down of Grand Coulee storage water must be spread over a 6-month period, from October 1 to April 1.

"This means that power must be rationed to conform with the water supply."

Mr. Chairman, I hope this legislation will receive the prompt approval of our committee and of the Congress before we adjourn, as the emergency requires prompt action.

Let me say in conclusion in answer to some questions raised by my colleagues at this hearing that the construction of these stand-by plants is not a temporary project to meet the present water shortage or to provide aluminum for war needs, which is in short supply at the present time. The plants will not be junked, as was suggested, when these emergencies are over but will remain as permanent installations to be maintained through their natural life as stand-by plants to be used in any such emergencies as they arise from year to year. As such, as I have already said, we are following out a practice of private utilities in maintaining stand-by plants to firm up hydro power.

The revenues received from their construction will amortize the investment in a period of 35 to 40 years. Judging from the history of the operation of Bonneville this period may be much less as the Bonneville Administration is some 10 years ahead in its amortization program. It is a sound investment from the Government's standpoint as shown by the testimony of those who have testified before us, and will not only provide stand-by power during periods of water shortage but will at the same time more than repay the Federal Government for the investment, in additional sales of power.

As I have often said to the Public Works Committee and on the floor of the House, I do not want to see the Government enter any commercial activity which can be carried on by private enterprises as well as by the Government. However, the installation of these stand-by plants is not a move on the part of the Federal Government to enter the field of production of electrical power by steam generation. As I have said, the steam plants are made necessary merely as an adjunct to the hydroelectric development in the Columbia River area in order to protect the development and firm up its hydroelectric power. In doing this the Government is following out a policy which is in force and effect in all private utilities producing hydro power. A notable instance is the city of Tacoma, where stand-by steam plants are maintained to firm up its hydroelectric power. The Tacoma plant is an outstanding municipal plant of the United States by reason of the great success it has achieved and the low rates it has been able to maintain in the interests of the people.

Some questions have been raised during the hearings as to the comparable cost of aluminum produced through the generation of electricity by hydro power as compared with fuel generation in steam plants. Mr. Arthur P. Hall, director of public relations for the Aluminum Co. of America, was recently in the Pacific Northwest where his company maintains several plants, and he is quoted in the Portland Oregonian in its issue of September 28 as saying that the Northwest has no corner on the power shortage, and that gas from Alcoa's own wells at a Texas plant costs twice what Bonneville hydroelectric energy does, and coal is several times as expensive. This, he said, virtually precludes additional potline development in such areas.

It should be recalled with reference to the additional cost entailed by the use of these stand-by plants that, as Administrator Raver testified before our commitee, the short time these plants would be in operation to firm up interruptible power would be insignificant in the over-all cost of power in the Columbia River area under the Bonneville Administration and this small additional cost could be absorbed without adding to the yearly cost of power to the aluminum industry. It is to be kept in mind that these stand-by plants will only be operated during emergency periods when hydro power is not available due to water shortage or other interruptions.

Mr. JACKSON. I wonder if I might at this point, Mr. Chairman, clear up one point raised by Mr. Mack as to the cost of steam generation versus hydro. I am advised by the Bonneville people that the plant investment per kilowatt on these steam plants will run $150 per kilowatt, as compared with the plant investment in the hydro system of $250 to $300. The difference between the two, of course, is that in the case of steam operating plants your operation costs are much higher than hydro. You include the investment plus the cost of operating them, which means that it is more per kilowatt as far as production is concerned, but the plant investment in steam plants is less.

Mr. MACK. On the whole, the over-all cost, including operation, is usually higher for steam plants than for the hydro.

Mr. JACKSON. I would say quite a bit higher in the Northwest. I just wanted that point clarified.

Mr. LARCADE. Mr. Chairman, may I ask the witness a question?

The CHAIRMAN. Yes.

Mr. LARCADE. I wanted to ask Mr. Jackson what is the estimated cost for the five units contemplated in the bill.

Mr. JACKSON. Mr. Larcade, there are eight units contemplated, three large units of 100,000 kilowatt each. They will cost $15 million each, or a total of $45 million. Then there are five smaller units that will cost $3 million each, or a total of $15 million, making a grand total of $60 million.

These plants, Mr. Larcade, will be placed throughout the Bonneville marketing area in accordance with sound engineering practices. In other words, as I understand it, the plants will be located in the extremities of the system, the purpose being to cut down line losses. You gentlemen on this committee are familiar with the fact that the farther you get away from the point of generation, the bus bar, the greater are the line losses. Therefore, it follows that when you firm up that interruptible power you want to firm it up at points that are in the extremities of the distribution system.

Mr. DONDERO. Mr. Chairman, I would like to ask a question.

Mr. LARCADE. Just one more question. There is no limit to the number of plants that can be constructed, is there?

Mr. JACKSON. There are limits. The bill authorizes eight plants, and the bill stipulates, I believe, that three of the plants are not to exceed 100,000 kilowatts in capacity, and five of them not to exceed 20,000-kilowatt capacity . You will find that in paragraphs (1) and (2) on page 2. Paragraph (1) relates to the three large ones, and paragraph (2) relates to the five smaller ones.

Mr. LARCADE. That is all, Mr. Chairman.

Mr. DONDERO. I wanted to ask my able colleague from Washington with what kind of fuel is it intended to operate these steam plants.

Mr. JACKSON. Mr. Dondero, the Bonneville Power Administration has under consideration several possibilities. They have made or are making a study on the utilization of coal in the area. Consideration is also being given to the utilization of wood wastes—sawdust, or hogged fuel, as we call it out there. Then the third, of course, is the utilization of oil.

Now as to what fuel is going to be used, it will depend, I presume, on two considerations. First, the fuel that is the most economical. This is a straight business proposition of producing the steam generation at the lowest possible cost. The second consideration, I would think, would be the effect on the shortages, if any, in oil or hogged fuel. At this time I do not know of any shortage in hogged fuel. There may be a shortage of oil later, but the Bonneville Power Administration is giving very serious consideration to the problem.

Mr. DONDERO. Do you have any coal out there?

Mr. JACKSON. Yes, sir. The problem with our coal——

Mr. DONDERO Is it usable?

Mr. JACKSON. The problem with our coal is that the British thermal unit rate is not as high as you find in other parts of the country.

Mr. JONES. What does it run in B. t. u.?

Mr. JACKSON. I do not know. I cannot answer that. I think that is one of the very things that the Bonneville Power Administration is trying to find out, to determine what the B. t. u. rate will be and whether it will be high enough to make it economical for use in these steam plants.

Then, of course, there is the possibility in some areas of the utilization of the waste products from our great lumber-producing areas, such as sawdust and hogged fuel. I know that Congressman Mack and Congressman Angell on this committee from the Northwest can enlighten the committee probably better than I can on that point.

Mr. DONDERO. One more question.

Mr. ANGELL. There is also a possibility there may be oil and gas coming from Calgary.

Mr. JACKSON. There is in the future the very definite possibility, Mr. Angell, of using natural gas from Alberta. However, the exportation of gas from Alberta seems to be bogged down by Canadian considerations up to this time that have been against export of that product. If that problem, a political one in Alberta, can be settled, then there is a very definite possibility, I would think, of utilizing natural gas from one of the greatest oil fields in the North American Continent that has recently opened up, as you know.

Mr. DONDERO. Under this bill would the Federal Power Commission fix the rates on power developed at these steam plants?

Mr. JACKSON. No.

Mr. DONDERO. To that extent, this bill does advocate a change in the law?

Mr. JACKSON. That is correct, and I might explain that.

Mr. DONDERO. Why not let the Federal Power Commission fix the rates as they do now?

Mr. JACKSON. Here is the problem, and it is for the committee to decide what they want to do about this point. As you may know, the Bonneville Power Administration markets the power from the federally owned generating hydroelectric facilities in the Pacific Northwest. The two dams in operation at this time are Grand Coulee and Bonneville Dams. Now, Congress in its wisdom in the past has seen fit to exempt Grand Coulee Dam or the Bureau of Reclamation from the provisions of the Federal Power Commission Act, so that the rates to be fixed on the sale of power from the Grand Coulee Dam are not passed on by the Federal Power Commission.

In that project alone, with the eighteenth generator now on the line, we are producing under normal conditions 2,000,000 kilowatts. On the other hand, Bonneville Dam, the other dam—the power sold from that dam is subject to review by the Federal Power Commission.

So I call to the committee's attention the fact that the great bulk of the power being marketed by Bonneville Power Administration is not subject to review by the Federal Power Commission. Therefore, I think the committee ought to decide at least on some definite policy as to fixing of rates in the sale of power from these dams.

Mr. DONDERO. One more question.

Mr. JACKSON. I have no fixed opinion about it. I think the committee ought to look into it.

Mr. DONDERO. Do the city of Tacoma in your State and Portland, Oreg., both obtain power from the Federal Government now?

Mr. JACKSON. The city of Tacoma and which other?

Mr. DONDERO. Portland, Oreg.

Mr. JACKSON. The city of Portland does not have a municipal system.

Mr. DONDERO. And the city of Tacoma?

Mr. JACKSON. The city of Tacoma is getting power from Bonneville.

Mr. DONDERO. Do you know how much they use?

Mr. JACKSON. I would have to ask a representative.

Mr. DONDERO. That may not be a fair question.

Do you know whether or not both the city of Portland and Tacoma in your State have had an application before the Federal Power Commission for some years for the right to build a dam, one on the Cowlitz River and one on the Deschutes?

Mr. JACKSON. I think I can be helpful in trying to answer that question by stating that the city of Tacoma has an application pending before the Federal Power Commission to obtain a permit to build a dam or dams on the Cowlitz River. The Portland General Electric Co., a private utility, has an application also pending before the Federal Power Commission to build a dam on the Deschutes River.

I just wanted to clarify your question by stating that the city of Portland does nat have a municipal power sytem. They are served by the Portland General Electric Co.

Mr. DONDERO. That is a private company?

Mr. JACKSON. That is right.

Mr. DONDERO. Neither one of those applications has been acted upon, so far as you know?

Mr. JACKSON. My understanding is that first an examiner's hearing has been held on both projects, and that——

Mr. DONDERO. How long have they been pending?

Mr. JACKSON. Well, I could not answer that. I think the last application was made a year ago.

Mr. DONDERO. When was the first one made?

Mr. JACKSON. I am not in a position to give that information. I really do not know the exact answer to that question. Maybe Mr. Mack might know.

Mr. MACK. Mr. Dondero, one of the things that has held up the Cowlitz dams is a great controversy existing as to whether these dams will destroy the fish runs on the Cowlitz, which is one of the principal tributaries of the lower Columbia River as far as fish spawning grounds are concerned. The Washington State Legislature opposed the construction of the dams on the Cowlitz, on the theory that these would destroy the salmon and smelt runs on the river.

Mr. DONDERO. Does the same effect and result obtain by reason of the construction of Grand Coulee in the upper Columbia?

Mr. MACK. Not to any such extent.

Mr. DONDERO. Have any statements been made by the fiishermen or wildlife people out there protesting or objecting to it?

Mr. JACKSON. Initially the opinion was expressed that Grand Coulee Dam would affect salmon runs. However, the Grand Coulee Dam, being in the upper portion of the Columbia River, has not borne out that prediction. The Grand Coulee Dam has not materially affected or even minutely affected the salmon runs in that area.

Mr. DONDERO. One more thing. You mentioned the name of Mr. Wilson in connection with the shortage of power. Has Mr. Wilson

recommended quite recently that some of the aluminum plants that want to locate there should locate elsewhere?

Mr. JACKSON. Mr. Wilson, I may say, will file a statement with the committee with reference to this bill. He is pretty well bogged down on a lot of problems, and his office advised me this morning to inform the committee that he will have a statement on this bill very shortly. There are several things he wants to discuss with his people first.

Now to answer your question specifically. Mr. Wilson has not recommended the removal of the aluminum plants from the Pacific Northwest. He sent telegrams to the companies, asking their views and suggestions regarding the possibility of moving.

Mr. DONDERO. That was not my question. My question was whether or not he had advocated that new aluminum plants be not established there but established elsewhere, not the removal of those that are there now.

Mr. JACKSON. His statement did not relate to new plants going into the area; his statement was with reference to telegrams to the three producers in the area—in fact, they are the only producers in the United States, namely, Kaiser, Alcoa, and Reynolds. He inquired of them as to whether or not it would be feasible or possible for them to remove their plants to some other section of the United States to operate aluminum pot lines.

Mr. DONDERO. You mentioned the Kaiser Aluminum Co. Has any effort been made to obtain other sources of power without putting the Federal Government into the production of power by steam plants, either from private sources, municipal sources, or other hydroelectric sources?

Mr. JACKSON. Mr. Dondero, in my statement——

Mr. DONDERO. I heard it. I listened carefully.

Mr. JACKSON. I am not avoiding anything. I will be very specific. In my statement I indicated that the Federal representative in that area, the Bonneville Power Administrator, had conferred with both private and non-Federal, that is, municipally operated companies, on this whole question of steam generation. I am advised that in addition the head of Bonneville has conferred with the Governor of the State of Washington to determine whether the State would be in a position to build these plants.

I can answer you by saying that neither the private utilities nor the municipally owned plants, and that involves the city of Tacoma and the City Light of Seattle, are in a position to build these steam plants.

I will answer further by saying that I do not think it would be fair, because the private utilities and the city of Tacoma and city of Seattle would be bearing the large portion of the high-cost generated power. You see, if they have to build these plants, then they will be distributing high-cost power to their customers.

Mr. DONDERO. The aluminum companies are the ones who use most of the power, as I take it, generated in the Columbia?

Mr. JACKSON. You will have to get the exact figures from the Bonneville representatives, but they are using close to 40 percent.

Mr. DONDERO. The reason I ask that is this: I noticed by the record that one of the aluminum companies, after the payment of taxes, had made a profit of 25 percent, or about $15 million net. I wonder if any of those companies have been approached to assist in the produc-

tion of power at their own expense, inasmuch as they are the great users of it, rather than make the Federal Government do it.

Mr. JACKSON. As the gentleman knows, I have indicated before this committee that these large federally owned projects are a great stimulus to private enterprise, and apparently our great power projects have made it possible, which is the thing we like to see, for business to prosper in the area.

I also would like to say that the fact is that in this great aluminum production roughly between 40 and 50 percent of all the pig aluminum produced in the United States is produced in this area, which has saved Uncle Sam untold millions in the last war. In other words, the cost of aluminum, Mr. Dondero, was reduced materially by reason of the fact that these aluminum companies were able to produce their power in this area. Approximately 40 percent of the cost of aluminum is power.

Now, to answer your specific point, I am not in a position to answer it because I have not conferred with them. I would suggest, if I may, to get an accurate and specific answer, that when Dr. Raver testifies he would be happy to give you that information.

Mr. JONES. Will the gentleman yield?

Mr. DONDERO. The difference in philosophy between us is simply this: Wherever the people can do it themselves, I want them to do it and not the Federal Government.

Mr. JACKSON. And I have great respect for your views, Mr. Dondero, as you know.

Mr. DONDERO. I may be a voice crying in the wilderness, but that is my idea.

Mr. JACKSON. In my statement I wanted to make it clear that both the city-owned municipal plants and the private utilities in the area have been consulted about this matter.

Mr. DONDERO. You mean they have been afflicted with the contagion?

Mr. JACKSON. All I can say, Mr. Dondero, is that I think the private utilities are doing very well. They get the bulk of their power from a Federal agency; namely, the Bonneville Power Administration.

The CHAIRMAN. Mr. Jackson, we have present now the Secretary of the Interior, Mr. Chapman. Would you mind waiting for a little while?

Mr. JACKSON. I am at the committee's disposition.

Mr. JONES. Before the gentleman leaves, the question was propounded to you by Mr. Dondero about the expansion of the aluminum industry and their provision for their own generating facilities. As far as I know, the most recent installations or reducing plants are being constructed by private industry, Kaiser in Louisiana and Reynolds in Texas. Both installations will provide their own generating facilities because there are just none available anywhere else.

Mr. JACKSON. I think, to answer directly the question you may have raised indirectly, that there isn't any place you can move these aluminum plants. We are facing a national power shortage, and I might advise this committee that is interested in this whole problem of providing adequate power throughout the Nation that our Joint Committee on Atomic Energy is presently contemplating an unbelievable increase in our atomic energy production facilities.

May I say to the committee that that is in the works now, and Senator McMahon, of our Joint Committee on Atomic Energy, and Carl Durham, from the House side, have introduced the necessary resolutions. When Congress is faced with that possibility, which is necessary in order to build up our military strength, we are going to face a catastrophic power shortage. It can be stated categorically that new hydroelectric and steam power-generating facilities will be needed in order to provide for this vast increase in atomic production.

Mr. DONDERO. Maybe that could be solved by the statement that we will produce electric energy by atomic energy.

Mr. JACKSON. Well, we now have a device, Mr. Dondero, known as a breeder device—it has not been put into operation—where we can burn fissionable material, produce electric power as a byproduct, and end up producing more fissionable material than we had when we started. Maybe we can avoid some of these problems.

Mr. DONDERO. That will save your coal out there.

Mr. SCUDDER. Mr. Chairman, just one question.

Mr. JACKSON. We need a lot of power to start with.

Mr. SCUDDER. I would just like to ask Mr. Jackson one question. I have been reading quite a bit about a $46 million loan that is being developed for a company to go into the Northwest.

Mr. JACKSON. I think you are referring to the Harvey loan, Harvey Aluminum Co.

Mr. SCUDDER. If you have a shortage, this insallation would aggravate the present situation.

Mr. JACKSON. Are you familiar with the——

Mr. SCUDDER. No; I am not.

Mr. JACKSON. With the proposal? Let me invite your attention to the fact that Congress in its wisdom arranged for the sale of power from Hungry Horse Dam, near Kalispell, Mont., to be allocated in part to that area. As you may know, Hungry Horse will come into operation and the first generator will go on the line, so to speak, in September of 1952. The Harvey Aluminum Co. proposed to locate their pot lines at Kalispell, Mont., and will get power from Hungry Horse Dam. Hungry Horse will produce in excess of 200,000 kilowatts, and that is where they will get the power.

We have other dams that will be coming into being. I would like to make it clear that this steam-plant proposal is not just an emergency matter. It is that, too, but it is also a necessary part of any business-like hydroelectric power development. What I am asking the committee to do here is the prudent thing done by all private utilities where they operate a hydro system.

Mr. SCUDDER. Would that same condition exist if we were not at war? Are we building our entire economy as a war economy, and are we expected to have wars from here on out in order to justify this action to firm up this power?

Mr. JACKSON. I wish I could answer that question, but I would say that the very heart of our military might is our industrial capacity, and the military strength of a nation today can be measured in kilowatts. If we do not have the kilowatt capacity, this country cannot turn out the atomic weapons, conventional weapons, and the other weapons that are necessary to protect the free world.

Mr. MACK. It is also true that the peacetime uses of aluminum are increasing by leaps and bounds, is it not?

Mr. JACKSON. Yes. It was said that when the war was over there would be no need for aluminum and the plants closed down temporarily after the war, and now they have been at capacity ever since the end of the war. I do not believe that there will be a surplus, to answer your question. Every bit of power in that area can be used, and with this tremendous expansion that is going to take place in the atomic-energy program we are going to need every kilowatt that we can possibly lay our hands on and get it just as fast as possible.

The CHAIRMAN. We will now hear Mr. Chapman. Mr. Jackson, you may be heard later on.

Mr. JACKSON. I am making myself available for any questions.

The CHAIRMAN. After all, it is your bill, and the gentlemen that are appearing are appearing in favor of your bill.

Mr. LARCADE. Mr. Chairman, may I suggest that we be furnished with copies of the reports of the Department of Interior and Federal Power Commission on H. R. 4963. I think it would be proper that they be placed in the record at the opening of the hearing.

The CHAIRMAN. Without objection, it is so ordered.

Mr. DONDERO. Mr. Chairman, before the distinguished Secretary of the Interior begins his statement, I would like to say that we are always delighted to have him appear before us because I think of him as a man to whom God gave a million-dollar personality.

STATEMENT OF HON. OSCAR L. CHAPMAN, SECRETARY OF THE INTERIOR

Mr. CHAPMAN. Now you have ruined my testimony. I feel very embarrassed by that remark.

I apologize to the Congressman for appearing to rush him. I will try to make my statement brief. I have about 20 pages here, which should not take more than 21 or 22 minutes to read. I can either read it or insert it in the record and just talk to you on the over-all question—you can question me generally as we go along.

The CHAIRMAN. Without objection, it will be included in the record.

Mr. CHAPMAN. There are some technical questions that obviously I will not have the answers, but I am sure Dr. Paul Raver, the Administrator of Bonneville Power Administration, can answer any detailed technical questions that might arise.

I just got in to hear that part of Congressman Jackson's statement where he stated that the building of these steam plants is not necessarily an emergency program. Myself, I feel it is just good business to build steam plants to firm up the power that is being developed from the hydroelectric systems. The Government has spent considerable money in hydroelectric development for the Northwest. The Northwest has one great resource, and it is their water power. It ought to be developed for them as an area program.

This part of the program, the building of steam plants, to my mind is only a part of prudent business management. We need it. The number of steam plants that we can build will firm up the secondary power that we can sell as firm power. That is just how simple it is, and I think it ought to be done.

I want to say further that the private power people of the area are thoroughly familiar with what is being done here. Some people say,

"Why don't we let the private power people build these steam plants?" You have a rate that is set for the whole Northwest, for the private power as well as the public power. I do not think it is quite fair to the private power people to ask them to build the steam plants to firm up the whole grid of which they are a part, because that is the higher-cost producing power, and they should not be asked to build the higher-cost producing power features of this while the Government takes only the cheap part of it.

I think we are working in a business partnership with the private industry up there, and I believe the Government ought to take a part of this high-cost producing power, which is the steam plants. That being true, in addition to the fact that it is just good business for the Government to build a steam plant to firm up its own power. It is always good business to be fair to your competitor, if you want to call them competitors. Actually the private utilities are partners in this development. They are all in this grid, and I think we ought to give them that much assistance in the proper way in helping build these plants.

We need the power. You are going to need every kilowatt that can be developed in the Northwest, and this is not subsidizing the Northwest as against another area of the country. You are building and developing a resource in the region which does not happen to any other place.

A good example of what we are talking about is aluminum. When the authority for aluminum development was in my department, I insisted that the Kaiser Co. locate its plant at New Orleans. They were first given an allocation, 100,000 tons of production.

Mr. DONDERO. Where did you say?

Mr. CHAPMAN. At New Orleans. Then, when we found we would need more production, I had immediately to look to find the companies that could take on more production. Kaiser wanted to put some more up in the Northwest. Well, here was the position that I was in. Here were three major aluminum companies, all of them having some installations already in the Northwest. Each, of course, wanted to increase those Northwest facilities. Obviously they could get cheaper power there than most anywhere else. But for several reasons—and among those several reasons one stood out with me—I felt that some small independent producer who wanted to get into the aluminum business should be given a chance in the cheaper power area. If he could succeed at all, that was the only place I felt he could do so.

The company that was referred to a moment ago, the Harvey Machine Co., had had a contract with the Bonneville Power Administration to supply them power if they could get the authority to build an aluminum plant at Kalispell, Mont. I felt, as Congress felt, that a portion of the power developed at the Hungry Horse Dam ought to be sold in Montana and ought to be used for Montana development. Therefore, the contract was made with them to develop it there. This program, as you know, has run into some difficulties and has not been fully clarified as yet and is still pending.

That was the position that we were in, in trying to allocate new aluminum producers into that low-cost-power area, but then, when we started to make allocations of aluminum for the additional requirements, Kaiser and Alcoa came in for some more.

After many conferences, I finally said to Kaiser, "I will not allocate any more to you at all unless you find a site in Louisiana to locate your plant, because you can get gas there cheap enough to develop your power." My technical people advised me that it could be done there. So Kaiser took me up on it immediately and increased his contract with the gas producers in Louisiana and doubled the size of his plant.

Mr. SMITH. May I interrupt the Secretary?

Mr. CHAPMAN. Yes, sir.

Mr. SMITH. Why did you specify Louisiana?

Mr. CHAPMAN. It is very simple. I am glad you asked that question because there is no mystery about this at all. In the first place, Kaiser did not have contracts with any gas people in Texas, as an example, and there was not adequate gas available any other place in the United States to supply him with the amounts necessary.

Mr. SMITH. Was a check made to see whether there was an adequate supply of gas in Mississippi?

Mr. CHAPMAN. Yes; that was checked. There was not an adequate supply for him at that moment, and he was not able to get a contract. Now, I insisted on Louisiana—and I say this very frankly—because that to me looked like the best place he could quickly get the supply of gas that he needed. And he did, by the way. In 48 hours he was able to get his contract increased to take care of this. I was told that he had people trying to get contracts from Mississippi producers, and was unable to get an adequate supply. That does not mean that Mississippi does not have a large reserve of gas. It does have. But this was the quickest way, and my problem was speed. I was trying to get into production as fast as possible.

Mr. JONES. That rate runs about 31 and 34 that they were able to obtain by gas generation; is that not true?

Mr. CHAPMAN. I do not remember the exact rate, Congressman, but I think that is correct. I am speaking from memory on that. He had a 100,000-ton production plant being developed near New Orleans, and it was much easier and simpler to double that capacity than to have to make new contracts for gas in some other place. That was his explanation to me, and my technical people with whom I consulted thought that was correct.

That having been done, the Alcoa people came in, and then Texas had a development of lignite that they felt could produce sufficient power. We said to Alcoa, "Why don't you look into that area and see if you can develop from another source of power, which is lignite?" So they have started and are negotiating and are going to develop their own power from the lignite development in Texas. Therefore, they got another allocation, all on the basis that we could not and did not want to allocate any more aluminum production in the Northwest at this time. I wanted an independent producer to locate in that cheap power area if we were going to get any more development there. The Hungry Horse Dam offered the only reasonable opportunity for any new development right at that time.

You are talking about the steam plants as being an emergency program. It is not an emergency program. It so happens to coincide with a major problem we have at low water flow. We have other dams coming into production in that whole area. I will read the list to you. There is Albeni Falls, 42,600-kilowatt capacity, which will

be in production in August of 1954; Hungry Horse in Montana that I have just referred to, 285,000 kilowatts, will be in production by October of 1952. Now, the Detroit is a 100,000-kilowatt development and will be in production in 1953. The Big Cliff is a small one. American Falls is a rather small one, but the McNary is 980,000 kilowatts. That will be in production in December 1953. I will go down the list and pick out the larger ones. Ice Harbor, which has not been finally approved, will be 260,000 kilowatts and will be in production in 1955.

I only point those out to you to show you that when these projects are in operation, we are going to increase our power output considerably. So you see we really need a program with some steam plants in that area to firm up this power which is going into the grid. That is the thing that I wanted really to bring to your attention. It is really needed, and I think this bill that has been introduced by Congressman Jackson adequately meets this requirement for a long-range program.

This is no subsidy, and it is no penalty upon the private power operators. I think this is as good a combination of private and public power development in the area as I have ever found anywhere. I have heard as few complaints from the private power companies on the Columbia Basin program as from any program or operation I have worked with in the country.

Mr. DONDERO. May I ask the Secretary a question: Has your Department protested or opposed the granting of a license to either the city of Tacoma, Wash., or Portland, Oreg., for the right to build a dam, either on the Cowlitz River or the Deschutes River?

Mr. CHAPMAN. Yes, sir. I have myself.

Mr. DONDERO. Why have you opposed that?

Mr. CHAPMAN. I am glad you asked that, because I think it should have a thorough explanation. First as to the Cowlitz. My own personal idea, as well as an official one from the Department, is that I do not like to see my Department push itself into an area in violation of a State law and contrary to the desires and wishes of the people of a State. I would like this program developed as something that the people of the State want as a whole. Of course, you are going to find some segments of the people who want it and some others who are opposed to it.

Mr. DONDERO. Did they want it or did they not?

Mr. CHAPMAN. If we could find a consensus adequate to support it, I would be for it; but on the Cowlitz, there is a State law that prohibits a dam being built above a certain level. I have been in communication with the Governor and with those people up there who want it and those who do not want it, and frankly I have said to them that if they could get the matter adjusted within the provisions of their State law I would be willing to recommend it, provided we could protect the rights of the fisheries on the stream.

Mr. DONDERO. Do you feel that every known resource for the development of hydroelectric power in that area has been exhausted, so that it now becomes necessary to resort to steam?

Mr. CHAPMAN. You say "have they been exhausted"?

Mr. DONDERO. Yes. Have you exhausted them?

Mr. CHAPMAN. No; I do not think they all have been exhausted, but even if we exhausted all of the possibilities for hydroelectric develop-

ment we would still need this steam plant development to firm up the power you have now under hydroelectric.

Mr. DONDERO. Do both of those cities now obtain power from the Federal Government?

Mr. CHAPMAN. Yes.

Mr. DONDERO. Mr. Jackson nodded his head that they do. If those two cities had been permitted to develop their own power, they would not now be a drain or a user of Federal power, and therefore you would not have a shortage to the extent that you now have?

Mr. CHAPMAN. Congressman, every time you develop a dam on one of these streams you have this problem to face. You want to develop a new resource, and we say it is power here, for the benefit of the whole economic base for that basin; but I do not think that you ought to try to develop one resource by destroying another one, and the other one in this case is fisheries. I have tried to modify that position to find a way to protect the fishery resource before we start developing the new resource.

You have a lot of private citizens up there that have money invested in the fisheries business, and I do not want to destroy that investment. I want to do everything possible to modify and minimize the cutting down of the source of supply of fish for this industry while we develop the other.

Mr. DONDERO. How long will it take to build these plants?

Mr. CHAPMAN. Probably a year and half. That is just a rough estimate on my part, Congressman.

Mr. DONDERO. I am only asking for information, that is all.

Recently the House—and I am bringing this to your attention on the question of whether or not there is the shortage which you indicated—refused action on three dams in the Northwest: Albeni Falls, Ice Harbor, and——

Mr. CHAPMAN. The Dalles.

Mr. DONDERO. And The Dalles. If the shortage there existed to the extent that you indicate, why did the House take that position?

Mr. CHAPMAN. Well, the Senate did not agree with the House and they put them all in, so they are now in conference. I do not want to advocate my case too strongly, but the Senate included those three projects, and I understand they are now being considered by the conferees.

Mr. DONDERO. My recollection may not be accurate, but I think the House this year has restricted the development of power in the Southwest and in the Southeast generated by steam plants. In other words, they have shied away from it. This proposal, Mr. Secretary, of course flies in the face of that action.

Mr. CHAPMAN. That, of course, Congressman, is where there is more definite conflict with the private utilities—in the Southeast, as an example. I still must say that I think it would be wise to develop those steam plants, even in the Southeast, but they are in more direct conflict with the private operators in the Southeast than in the Northwest.

Mr. DONDERO. Have private operators refused or are they unwilling to go ahead and develop power in the Northwest?

Mr. CHAPMAN. No; they are not unwilling and they have not refused. They have done about all they can. They are trying to develop it. As a matter of fact, they have some private steam plants

not in operation today. They are rehabilitating them, in one case particularly. They are working on them.

Mr. DONDERO. Has one company sold out entirely to the Federal Government in the Northwest?

Mr. CHAPMAN. No.

Mr. DONDERO. Or another one—I think it is in Seattle, but I am not sure—where it is fighting for its life to remain in business?

Mr. CHAPMAN. Not if you read their returns on their investment. You would not think they are fighting very hard.

Mr. DONDERO. I am depending on memory, and I may be in error.

Mr. CHAPMAN. I do not think they are struggling very hard.

Mr. MACK. Mr. Secretary, the private companies as well as the public companies are all in favor of this Columbia development?

Mr. CHAPMAN. They are, Congressman.

Mr. MACK. I would like to clarify Mr. Dondero as to this fisheries controversy. The fishing interests and the fishermen are not opposed to the construction of all dams on the Columbia River. Their position, as I understand it, is that those dams should be built first which interfere least with the fishing runs on the Columbia River and its tributaries.

Mr. CHAPMAN. That is correct. That is a good statement, because that is their position.

Mr. DONDERO. Does that include the three dams I mentioned?

Mr. MACK. No; two of them. The Albeni Falls Dam will not interfere with the fish, but the others will. The reason that the House rejected those provisions probably was that there exists a controversy between the fishing interests and those that want the dams.

Mr. DONDERO. Mr. Secretary, are you forward looking enough to say to this committee that possibly we can produce electric energy through atomic energy in the not too distant future?

Mr. CHAPMAN. I have always been very cautious in commenting on something that is not any of my business and that I do not know anything about. I have not the slightest idea how soon atomic energy could be brought into force, but I want to say that until they have shown me more than they have today I want to keep developing hydroelectric power.

Mr. DONDERO. That question was asked having in mind the fact that some things are now being done by atomic energy.

Mr. CHAPMAN. We are all living in an age of hope with respect to those things, but it is going to take a long time; and it takes a large quantity of power to make atomic energy.

Mr. MCGREGOR. Mr. Secretary, I understood you to say that in a good many instances, and possibly most instances, when hydroelectric projects are constructed it is essential and necessary to have steam generating plants in order to get firm power.

Mr. CHAPMAN. Congressman, it is not in all cases essential or necessary, but where you have developed a grid and a public-power grid and private-power grid combine, such as this is, then it does become necessary as a good business thing to do. It is sound business.

I would like to simplify that. I am going to speak from memory now. Suppose we could develop two or three hundred thousand kilowatts by steam power. That would mean that you could firm up that many more interruptible kilowatts of power that you are now selling as secondary power from the hydroelectric plants.

Mr. DONDERO. The reason I raised that question—if my memory serves me correctly from the 10 or 11 years I have been on this committee—is that one of the main arguments for all these hydropower developments in the great Northwest is the fact that you have the power there if we simply construct projects, and a number of us always have raised the question: "You are going to have to come along with steam power in order to firm it up." But, when you are asking for the authorization for the projects, no one ever seems to mention the steam-power proposals.

Mr. CHAPMAN. Congressman, I am glad you make that reference, because I have long held that we ought to discuss this power-development program on hydroelectricity in relation to the practical realities. You should at least think in terms of some small amount of steam-plant development along with hydroelectric power at some future date. That does not mean that you are going to have to have steam plants necessarily on all of them. Some of them do not have to have it. Take the Hoover Dam development. You do not have steam-plant development for that, and yet you are selling power clear into Los Angeles and other areas over that whole area. But in some of these areas, particularly where you are developing as here, it seems to me to be just good, prudent business. You simply increase the value for your hydroelectric power by having a small steam plant.

Mr. DONDERO. There is one question I omitted. I noticed that the steam-developed energy was about one-half percent of the amount of energy produced in the Columbia Valley, or about 343,000,000 kilowatt-hours, as against some 21,000,000,000 total amount. If this bill passes and this steam-generated power is added, you will be increasing the amount of steam power about 10 percent, or from 343,000,000 to 3,050,000,000. Is that not a tremendous jump?

Mr. CHAPMAN. May I let Mr. Raver answer that for you. He is technically qualified to speak on that.

Mr. RAVER. We will probably double the amount of kilowatt-hours generated by steam.

Mr. DONDERO. Am I wrong on the figures I have used, which are 343,000,000 now developed by steam power to 3,050,000,000 that would be developed if you established these eight plants?

Mr. RAVER. It depends on the water conditions in every year. We estimate that these new plants will be operated not more than 25 percent.

Mr. DONDERO. But the capacity would be about 10 times what you are doing now?

Mr. RAVER. The capacity will be about double what we have now.

Mr. DONDERO. And not 100 times?

Mr. RAVER. No, sir.

Mr. DONDERO. I looked at the figures and said, "That is a hundred times as much."

Mr. BRAY. Mr. Secretary, what is the fuel that might be used in this steam generating plant? There is a decided shortage or liable to be quite a shortage of oil. I at one time discussed this matter with some gentlemen in your Department. This possible shortage was said to be so serious that you are seriously contemplating—and wisely so—generating gasoline oil from shale and coal. Yet, here apparently you are contemplating the possibility of using oil to generate fuel. If anything could be more scarce in an all-out war, or more necessary

than electrical energy, it would be fuel oil and gasoline. I frankly think that there should be some definite understanding that scarce fuel oil will not be used in generating steam in these contemplated works.

Mr. CHAPMAN. You ask a very important question, because it goes to the very heart of our ability to meet this entire defense effort. Now, first you have to take things in the order of their importance and their essentiality to doing the job. If you build these steam plants up there, my first recommendation would be for them to try to do it for coal development if they can, because that is available; and, if that is not available, there are certain others who are talking about using sawdust and wood material.

Mr. BRAY. It would be very fine if it would work.

Mr. CHAPMAN. I think you ought to exhaust all the possibilities of using coal before you allow them to use oil; but then you must think of this: If that did not work, you have to then turn to your next most essential fuels. Oil is essential and important to any mobilization effort as well as in peace, but power is just as essential. You could not operate without power. Then you have to make a decision: Shall we use oil here to generate this power or shall we let the power go down?

Mr. BRAY. Mr. Secretary, I cannot contemplate that you could not use coal, because in Indiana we do not have any Federal power and we do have a lot of oil production, of which we are proud, and we do make and pay for all of our own power locally without any help from the Government, as you are well aware.

Mr. CHAPMAN. That is right.

Mr. BRAY. And we in no way contemplate using oil to fire those boilers. We use coal, and I do not see why the United States Government cannot be just as careful of our scarce resources as we expect an individual or private corporation to be. It seems as though the Government may be trying to operate on both sides of the street. We say we must make oil artificially, and then we start using it to generate power when we can use coal better and cheaper for the same thing. I frankly cannot understand that kind of attitude. I know you are genuinely interested in conserving the oil supply, and in the artificial production of oil if necessary. I think you are doing a fine job on these plans, and I intend to support your plans in that line. But let's not play both sides of the street. The Government ought to be just as honest and sincere as we expect private industry to be.

Mr. CHAPMAN. No question about it. They must be. My first choice would be that they make every effort to use coal for generating this power.

Mr. BRAY. For what possible reason could they not use coal, which is cheaper and in abundance?

Mr. CHAPMAN. I do not know of any, unless it is some question of the quality of the coal that might be available. That is the only problem. When you move into that, you have to take into consideration the problems that face you in the quality of the coal. The B. t. u. content is an example. You say there is plenty of coal available, but transportation from the source of it to the plant might become prohibitive. So, it is purely a question of economics in using it. First, is it available? I think it is available. Second, is it the kind of coal

that will produce the generation that you need? It may or may not. That is something you have to test.

Mr. MACK. Mr. Secretary, Grays Harbor, where we have 60,000 people, has a steam power plant which uses waste wood from the sawmills. The States of Oregon and Washington are the two largest producers of lumber in the United States. Those two States, combined, probably produce one-third of the Nation's total lumber supply. We have lumber mills at Coos Bay, where I understand, one of these plants is contemplated; and Longview, where another plant is contemplated, is probably the greatest lumber-producing city in the world. These communities have tremendous quantities of hog or wood fuel.

Sometime ago I had occasion to discuss with the Forest Service the amount of waste wood that was lost in logging and milling operations. They informed me that 60 percent of the tree, from the time that logging starts until the wood reaches a finished product, is wasted. In other words, more wood is wasted in logging and milling operations than finally becomes lumber. It seems to me that in this particular Pacific forest area perhaps wood fuel would provide the cheapest generation possible, and at the same time conserve coal and oil for other uses.

Mr. CHAPMAN. Just for the sake of clarity, when I said to Congressman Bray that my first choice would be coal, I did not quite state it correctly. I mean either one of these two. First, it would be more practical and be more economical if you could use this wood wastage we are talking about. That would be the better thing to do, if you could, to save your coal for another higher use at some later date. Wood and then coal would be your first two choices.

Mr. DONDERO. I want to correct an error I made. It was 10 times as much instead of 100 times as much. Two or three ciphers today, you understand, do not mean much.

The CHAIRMAN. Would it not be cheaper to have the gas piped in there and use gas for fuel instead of either coal or wood?

Mr. CHAPMAN. You have to pipe that gas quite a long ways to get it up there. You are immediately thrown into another problem of the use of steel to get a pipeline in. That is one thing. I am not eliminating that possibility at all. It is possible that you might pipe gas in, but that is a question of economics. You have to study it very carefully to see how much steel is needed to pipe it in from the source of supply. You have only two sources you could get it from, one in the Southwest and the other in Canada.

The CHAIRMAN. As I remember, there have been many statements about the shortage of oil in this country and how we had to conserve it. Now we are talking about using oil to run these steam plants. Do we really have a shortage of oil in this country?

Mr. CHAPMAN. Mr. Chairman, let me give you a picture of the oil situation in this country. When I came to the Department as Assistant Secretary of the Interior 18 years ago, I was using the figures in some of my speeches that were prepared and presented to me by the American Petroleum Institute and by the officials of the Department of the Interior, Geological Survey, and Bureau of Mines. They were saying we had only 21,000,000,000 barrels of oil reserves left in this country. That was 18 years ago. At the rate we were using it 18 years ago, it would only leave a supply for about 14 to 16 years, because

you could not get out the last reserves of oil as easily as you can get the first. It takes longer, and sometimes you do not get it at all.

What has happened since 18 years ago? We have continued development exploration program for oil in this country. Today the figures we are using are something like this. I cannot be exact, but these are in round numbers. Today they are using the figure of 25 billion barrels of known reserves. We are producing 6 million barrels a day and using 7 million; so we are importing a million barrels a day now. What happened was not that anybody was using false figures. They were using the best figures they had at the time and the best knowledge they had. Both private industry and the Government were using the same figures. That has been the shift and the change. With that amount of production, we are not short of oil today. But look what the difference is. In the last war your B–29's used 340 gallons per hour; today the jet planes use 940 gallons an hour. The ratio of all the war machinery today is developed on the basis of the accelerated use of petroleum products.

The CHAIRMAN. We have so much wood in the State of Washington; and, as Mr. Mack stated, 60 percent of every tree is wasted, why would they not use up that wood?

Mr. CHAPMAN. I think it should be used. I think you ought to do everything you can to use up that waste wood for the development of this power, and I would insist they do everything they can to bring it into use. I think it should be used first.

The CHAIRMAN. Can that wood generate a heat that will be sufficient, equivalent to coal? Could they mix that with oil?

Mr. CHAPMAN. I do not know. Dr. Raver could answer that question better than I.

Mr. RAVER. Yes; the wood waste can be used. It takes a greater volume. The B. t. u. are not as concentrated in wood as in coal; so you have a transportation problem in getting a large volume of this sawdust into a plant, and you will see tremendous sawdust piles around the steam plants using sawdust.

The CHAIRMAN. Could they use a mixture of oil and sawdust?

Mr. RAVER. I do not know about that.

Mr. CHAIRMAN. I do not know the technical features of that and whether it is feasible or not, Congressman. You ought to utilize your waste wood first if you can. You ought to study the economics of it to see if it could be done. It raises problems, as I said before, of transportion and other factors. Then you ought to use coal first before you use oil. If you cannot get satisfactory production out of that, you may have to use oil or gas. I think you ought to be conscious of the problems involved in each one of these possible uses, and you ought to try each one of these in the order I have indicated to see if it can be done.

I want to make one more general statement.

Mr. MCGREGOR. May I make an observation. I listened with a great deal of interest to the information relative to the oil shortage and the figures you used over the period of 18 years. I cannot help but make the observation that the same argument would be applicable to the ore shortage.

Mr. CHAPMAN. It could be, because you may find more new ores you know nothing about today. You may keep finding new ore bodies, and sometimes you extend the beds you already have. Remember this: The

mineralogists and geologists cannot be exact in their estimates of reserves under the ground, but they have been pretty close. The same problem could exist on ores, but it is not likely to occur as in petroleum.

Mr. McGregor. But the figures on ore could be as wrong as the figures on petroleum.

Mr. Chapman. We have to rely upon what we think is the best information, and you turn to those sources for it. In the St. Lawrence seaway, we turned to private industry and to officials of the Federal Government, and I think by tying the two together we had pretty accurate figures, as accurate as anyone is able to present, on our reserves.

I want to say to you on that one point that I feel very concerned about the ore situation. I think it is dangerous.

Mr. McGregor. Eighteen years ago you felt very deeply about the oil situation.

Mr. Chapman. I did, and if we had not given the oil industry an opportunity to keep developing and prospecting for oil we would have been in the position I thought we were going to be in.

Mr. McGregor. And that is applicable to ore?

Mr. Chapman. It is. We are at the point on ore where it is time to move.

Mr. Dempsey. Mr. Secretary, due to more scientific principles and conservation, the oil recovery is about 30 percent greater than it was in those days.

Mr. Chapman. That is correct. The oil recovery of any known field is greater than it was 18 years ago.

Most people get the impression that we are just trying to saddle $60 million on the taxpayers. That just is not true. It just so happens that these steam plants will amortize and pay themselves off in less than 35 years at the rate that we are now charging for power. Every dollar will be paid back into the Federal Treasury by direct payments, and the Nation's general tax structure is not affected in any way.

I am always proud to refer to the fact that out of the appropriations given to the Department of the Interior we return one-half of the revenues we receive to the Treasury direct, and in this case it will all be returned.

Mr. Mack. Mr. Secretary, Mr. Jackson testified that these plants will cost $60 million. This money, I understand, would be advanced by the Federal Government for the construction of these plants. Will the Federal Government get back that money from the operation of these plants?

Mr. Chapman. Every cent.

Mr. Mack. Over a period of how many years?

Mr. Chapman. Thirty-five years.

Mr. Mack. In short, at the end of 35 years the Government will have all of its money returned, plus interest?

Mr. Chapman. Plus interest.

Mr. Mack. Plus depreciation?

Mr. Chapman. Plus depreciation.

Mr. Mack. And after the period of 35 years the Federal Government will still own the plants and still continue to derive revenue from them?

Mr. Chapman. Still get the same revenue.

Mr. MACK. There is one question Mr. Dondero has asked you and asked Congressman Jackson, which seemed to infer that perhaps these steam plants should be delayed until we ascertain whether we can derive power from atomic energy. Now, if these plants should be delayed until we determine whether it is possible to get power from atomic energy, then, I should think, the power dam on the St. Lawrence which Mr. Dondero is very anxious to have built should be delayed also. I am in favor of the St. Lawrence project and also in favor of the steam plants proposed by this bill.

Mr. DONDERO. Inasmuch as my able friend has brought that up, the question was not whether it should be delayed until you found out whether they could do it by atomic energy. I simply asked whether there was a possibility that it could be done, but the question that I did ask directly was whether all other known sources had been exhausted, to determine whether this additional power should be brought into being, and rather than have the Federal Government do it.

Mr. CHAPMAN. The private operators are not going to make an investment unless they can see some way to get a return from it. In this case we have analyzed it very carefully, and in going over all of these projects that I have mentioned a moment ago, some of them coming into production next year, some in 1953 and some in 1954, even when you get all of those in operation, I want to repeat that it is just prudent business to add steam plants to help as stand-by power. A private company would do the same thing if they had the dams themselves. It is prudent for us to do it. I think it ought to be done, and I do not like to have the impression that every time we ask for hydroelectric development we are never going to talk about steam plants. We ought to develop and build all the hydro plants that we need. That is one of the rich resources that we have. It is renewable. We ought to keep using it all we can before resorting to steam plants, but when you have got one that you can firm up and so get more out of your hydroelectric, then use a steam plant to get more power.

There is nothing sacred about building a steam plant and no good reason why the Federal Government should not build one in connection with its operations on this kind of a program. It is just sound business to me. I think it is a sound approach, and I think it ought to be done.

Mr. LARCADE. Mr. Chairman, may I be recognized?

The CHAIRMAN. Yes, Mr. Larcade.

Mr. LARCADE. Mr. Secretary, I probably will not ask any questions. I would like to make some observations. Coming from Louisiana, of course I could not be silent in a discussion of this important matter, due to the fact that, as was brought out in your appearance before the Appropriations Committee some time ago in colloquy with the senior Senator from Louisiana, Senator Ellender, proving, I think, the advantages of using natural gas to produce power, and that Louisiana can furnish all of the natural gas that is required for almost any eventuality; that we have an inexhaustible supply of natural gas for the development of power. This sentiment is made without prejudice to the great Pacific Northwest, because it has been my opinion, and I have demonstrated it on numerous occasions, that I am for the development of every section of our great country and that every section of the United States is entitled to full consideration and their fair share

of necessary assistance from the Federal Government in the development of all of the resources of any section of the United States. But of course, in all fairness to the district which I represent, which is the Seventh Congressional District of Louisiana, the heart of the natural-gas industry in Louisiana—and, I repeat, with an inexhaustible supply of natural gas, and, Mr. Secretary, which fact I brought to your attention a few days ago when Mr. Wilson announced that it might be necessary to relocate or make new locations for these aluminum plants—you will recall I wrote you and called your attention to the advantages of the Lake Charles area.

At this point I again want to call your attention to those resources, and if you are unable to make the necessary arrangements to supply the necessary power in our defense effort elsewhere, I certainly want to ask your full consideration of the Seventh Congressional District in the Lake Charles area. The entire resources of our State and my district are at your disposal, and you will have the full cooperation of our people in the defense effort.

Mr. CHAPMAN. Mr. Congressman, I want to say to you that I thank you.

Mr. DONDERO. Mr. Secretary, that simply proves the modesty of our friend from Louisiana, he always exhibits it.

Mr. CHAPMAN. Well, he is modest, but I want to say this: The people of Louisiana, the officials and everyone else, have given me wonderful cooperation in working on these complicated problems. It is not easy to say to private industry, "You must go and put your plant here or there." When you do that as a Government official, you had better have it based upon something very solid economically. We try to point out to these people the possible availability of their source of energy, and in the case of Louisiana we took the Kaiser case as a typcial example. We did point out that we thought it would be cheaper and better for them to move there.

There are two principles involved in that reasoning. First is the principle of dispersion. We did not want to overly concentrate these aluminum plants in the Northwest as I felt that we already had a great many industries in the Northwest and that we may be taxing our power supply. I wanted to disperse these industries so that the resources of another area could be used, and the Lake Charles area does have a very hopeful outlook for locating new defense plants that will need power and energy. I will bear it in mind, Congressman. I would like to get more of them down there, and I would like to get some in Mississippi, because they have a very large supply of gas.

Mr. DEMPSEY. Mr. Secretary, like you I love some of these southern gentlemen, but we come from the West. I recall many speeches you have made in the vicinity of Albuquerque, where you obtained part of your education. Let's not forget home.

Mr. DONDERO. Mr. Chairman, there is one more thing and I am through. Is there any precedent in the history of this Government for this request?

Mr. CHAPMAN. Yes.

Mr. DONDERO. Are you referring to the Johnsonville plant of the TVA?

Mr. CHAPMAN. Yes.

Mr. DONDERO. That is a separate authority that operates practically as a sovereign above the United States.

Mr. CHAPMAN. I do not agree with you on that.

Mr. DONDERO. Is there any precedent for it in the Department of the Interior?

Mr. CHAPMAN. In the Department of the Interior we have not built any steam plants.

Mr. DONDERO. This is the first request?

Mr. CHAPMAN. I do not know that it is the first request, but it will be the first one approved, if we get it. I do not remember whether we have asked for others or not, but I think probably we have.

The CHAIRMAN. Mr. Secretary, is it not a fact that there are a number of manufacturing plants now in the State of Washington that are getting insufficient power and that is the reason you want to build these plants?

Mr. CHAPMAN. Mr. Congressman, the answer should be phrased this way: There is a power shortage, but we are supplying all of the contracts on firm power that we have in the Northwest today. It is the contracts that were made on interruptible power that have been cut off at the moment, and the private industries who bought that power because it was interruptible and bought it under contract on that interruptible basis. They expected when they contracted for this interruptible power that this type of power might be cut off at any time. This is nothing new. This happens practically every year in the Northwest for short periods.

The CHAIRMAN. I have an article here from a newspaper about trying to make rain up there.

Mr. CHAPMAN. I think it would be a very good idea to try it. There is a possibility of that.

The CHAIRMAN. How about the farmers in that area? Are they going to suffer as a result of trying to make rain? We have about 25,000 lawsuits in the State of New York where they made this rain.

Mr. CHAPMAN. Mr. Congressman, you have asked a very serious question. When you are moving into this rain-making business, it is all new to most people and certainly new to me. We are experimenting with this in the hope that something can be done in seeding the clouds, as they call it. In this case it is being done, principally over the wooded areas in the national forests, as a matter of fact.

The CHAIRMAN. It seems to spread out all over the farm area. The farmer cuts his hay and wheat and can never get to thresh it.

Mr. CHAPMAN. That is one of the problems involved. There is no absolute control or certainty of success in this rain-making business.

Mr. MACK. Mr. Secretary, another reason for the power shortage in the Northwest is the great growth in population which the States of Oregon and Washington have experienced in the last 10 years. In the last 10 years, the population has increased in Washington more than 600,000 and in Oregon more than 400,000. The Bonneville Power Administration now has to serve about 300,000 more families than it served in 1940, and has more industries to serve.

Mr. CHAPMAN. Your population increase in the State of Washington was 42 percent in the last 10 years.

The CHAIRMAN. Is it not because of the new factories up there that they need this new current?

Mr. MACK. That is one of the factors that has contributed. I think the Secretary would agree that the growth that has occurred in

the Pacific Northwest in the past 10 years is probably going to be exceeded in the next 10 years, partly through the development of power facilities and partly through the development of the great Columbia Basin irrigation project. Your Department estimates that 17,000 families, or 75,000 people, will move onto Columbia Basin land, and that in addition it will require 2 persons in the nearby cities and towns to supply the goods and services these new farm families use. In other words, by the estimates in your Interior Department, more than 200,000 people will move into the Columbia Basin in eastern Washington between now and 1962 and 1963.

Mr. DONDERO. Of course, he is predicating that on the basis that human nature will not change in the next 10 years.

Mr. CHAPMAN. I do not think it will either.

Mr. DEMPSEY. If you fail to get this stand-by power, what will be the consequences?

Mr. CHAPMAN. The consequences would be this: You would not be able to supply your secondary contracts that you have with industry today. We cannot supply them now except on an interruptible basis. Therefore, we cannot make available to them this amount of firm power they ought to have to keep going.

Mr. DEMPSEY. How is it going to affect aluminum production?

Mr. CHAPMAN. It will affect all the industries up there, as a matter of fact, to a certain extent.

The CHAIRMAN. I do not want to interrupt, Mr. Secretary, but I would like to ask this: The power plants that we have for making materials other than aluminum are essential to the war effort, are they not, and can they operate if we do not install this steam plant?

Mr. MACK. The plants cannot operate at fullest efficiency unless we have these proposed steam plants.

The CHAIRMAN. Are they necessary to carry on the war effort?

Mr. CHAPMAN. In my opinion the plants are necessary, because these war industries cannot operate at fullest efficiency unless we have additional power, and we need the power now, not sometime in the far-distant future.

The CHAIRMAN. Then why wait until atomic energy discovers something that may operate these plants? We are in a war now.

Mr. MACK. The Columbia River is a very peculiar stream. It is the second largest river in the United States in the volume of water it discharges into the ocean. It is twelve hundred miles long. It flows very rapidly. It has extremely high banks that form natural impounding basins for water. Land that is overflowed behind the dams is largely arid land that is of no value. Dams and lakes behind dams can be built in the Columbia River Basin cheaper than anywhere else in the United States; we also have the potentiality of a greater abundance of power there than exists in any other area.

Mr. CHAPMAN. May I add an answer to what he has said. You asked about the interference with the aluminum plants and other defense plants up there. Yes, some of them are closed today.

The CHAIRMAN. That is what I am interested in.

Mr. CHAPMAN. And they need this stream power to firm up this interruptible power, so some of the present defense plants located there now can reopen.

Mr. MCGREGOR. Mr. Secretary, some of us who live in the Midwest and Central States have aluminum plants only operating 25 or 30 percent of the time.

Mr. CHAPMAN. That is correct.

Mr. MCGREGOR. Why not give these plants some of these contracts instead of to the Northwest, where you do not have the power, and bring it back to the Midwest where we have unemployment, coal, and power and locate them there?

Mr. CHAPMAN. One of the problems is power to supply them.

Mr. MCGREGOR. We have the power and coal and the gas in Ohio.

Mr. CHAPMAN. You have power in terms of the energy from coal that you can develop potentially, but as of the moment when these plants had to be located you were not in an oversupply area of power.

Mr. MCGREGOR. We have a plant in my district, an aluminum plant as you know, operating only a percentage of the time.

Mr. CHAPMAN. On account of the shortage of power.

Mr. MCGREGOR. Oh, no.

Mr. CHAPMAN. Isn't that it?

Mr. MCGREGOR. If it is, it is news to me.

Mr. CHAPMAN. Why are they not operating?

Mr. MCGREGOR. That is what I would like to know.

Mr. CHAPMAN. I do not know why they are not operating. You have to remember that the power that goes into the production of aluminum is probably the highest factor of cost involved in aluminum.

Mr. MCGREGOR. I am not going to take up the time of the committee, but I do hope I have the privilege of finding out why our plants are not working to capacity and yet new plants are being constructed to produce the same products.

Mr. CHAPMAN. I do not know if it is because of the power shortage or labor shortage or material.

Mr. MCGREGOR. We are told it is because of no orders.

Mr. CHAPMAN. They ought to have all the orders they need. There certainly ought to be plenty of orders, because you cannot supply the peacetime use, let alone the great need for aluminum during the present emergency.

The CHAIRMAN. I would like to adjourn this meeting until this afternoon. We have a very important House resolution as the first order of business, the resolution on the unity of Ireland.

Mr. CHAPMAN. Mr. Raver, the Administrator of the Bonneville Power Administration, has the detailed technical information. I would like to have him follow me on the witness stand to talk to you. I have given a broad general statement and tried to make it as definite as I could for you.

Mr. DONDERO. Mr. Chairman, there certainly will not be any objection to that. With a resolution as important as the one that we have before us this afternoon, I do not think that any member will want to be in the committee but will want to be on the floor.

Mr. CHAPMAN. I agree with you. Dr. Raver will be available when you finish with your resolution.

Mr. JACKSON. Is it the desire of the committee to meet tomorrow morning? We have these people here all the way from the Northwest, and it occurred to me that if Dr. Raver testified next he will have with him his chief engineer and his chief counsel and other technical people here, so they can answer questions that may arise in connection with the hearing. Then in addition there are one or two other witnesses. I believe that will conclude our side of the presentation.

The CHAIRMAN. We are going to try to get permission from the Speaker to hold this meeting at 3 o'clock this afternoon.

Mr. JACKSON. Whatever the committee desires.

Mr. LARCADE. I assume the Secretary has completed his statement and that he will be followed by Mr. Raver this afternoon.

Mr. CHAPMAN. That is right.

(Mr. Chapman's prepared statement is as follows:)

STATEMENT BY SECRETARY OF THE INTERIOR OSCAR L. CHAPMAN

I am pleased to come before you today to urge that this committee recommend the speedy enactment of H. R. 4963. The purpose of this bill it to provide authority for the Secretary of the Interior, acting through the Bonneville Power Administrator, to construct and operate fuel-fired electric generating plants in the Pacific Northwest.

Gentlemen, the defense program of the United States is being seriously hurt at this moment because of lack of a firm electric power supply for the defense industries of the Pacific Northwest. The huge hydroelectric plants which have been built in that region by the Federal Government during the last 15 years have attracted about half of the Nation's present aluminum-producing capacity.

Nowhere else in our country has there been so great an expansion in hydroelectric power facilities in that period. Despite our rapid progress, however, we have not been able to get new power generators on the line fast enough to meet the demand, though my Department has consistently recommended a faster rate of power installation than has been approved. The net result has been that year after year we have been falling further and further behind in our construction schedule of power-producing facilities. No new aluminum plants have been built in the area since 1944, therefore increased demands do not come from the aluminum industry. Constantly increasing domestic requirements, expanded commercial and other industrial uses have been responsible for the load growth.

Because of this circumstance, the Boneville Power Administration, the Department's power-marketing agency in the Pacific Northwest, must sell power to several of its customers, among them some defense industries, on an interruptible basis. This means that power can be made available to them only when made possible by adequate stream flow. Last week because of low stream flow it became necessary for the Bonneville Power Administration, under its interruptible power contracts, to reduce the flow of power to some of its customers, including industries which are engaged in critical defense production activities.

The welfare of the country demands that we take the necessary steps to correct the power deficiency of the Pacific Northwest at the earliest possible moment.

The authorization for Federal construction of fuel-fired electric generating plants in the Pacific Northwest, as proposed by H. R. 4963, introduced by Congressman Jackson, represents the most immediate solution to this critical situation. For these very compelling reasons, among others, the Department of the Interior urges the prompt enactment of this bill.

Construction of the fuel-fired plants would not in any way detract from the urgency of continuing an adequate construction program for other power facilities in the Pacific Northwest, including Ice Harbor, The Dalles, Hells Canyon, intertied with adjacent power systems and other features which are in the Bonneville Power Administration's program.

Bonneville's estimates of future power loads, the validity of which are proven by the very situation we are in today, show that these new power resources, in addition to the fuel-fired plants, will be required by the future demands of the region. We must have an orderly long-range program dictated and determined by the requirements of the region.

For many years, public and private power distributors alike have depended in the Pacific Northwest for new power resources upon development by the Federal Government. The program of Federal expansion is supported by the private power companies of the region. The most recent example of this support was during hearings on the civil functions appropriation bill for fiscal year 1952 while it was under consideration by the Congress.

In my judgment, it was unfortunate that the House of Representatives saw fit to strike from the bill appropriations for several items that are essential if power demands in the Pacific Northwest are to be met.

The fuel-fired plants which would be authorized by H. R. 4963 will be a vital part of the Federal power system in the Pacific Northwest. It is entirely appropriate, in my judgment, that they be constructed by the Federal Government.

The Pacific Northwest is at this very moment in the midst of one of the most critical periods of shortage in its history. Following a summer period in which rainfall throughout the area has been at a minimum, the flows of the Columbia and its tributaries have been falling in a way which follows the pattern of minimum water years.

The flow into the Grand Coulee Reservoir has declined from 88,000 cubic feet per second on September 4 to approximately 60,000 cubic feet per second at the present time. The power production of Bonneville Dam has fallen from approximately 544,000 kilowatts as of the beginning of September to less than 440,000 at the present time. If this trend continues, further drastic curtailing of power usage will be required. Already the Federal system, consisting of Bonneville and Grand Coulee Dams and the Bonneville transmission network, has been forced, as I have said, to issue curtailing notices and to reduce the supply of power to those of its customers supplied by interruptible power. The Defense Electric Power Administration has isued orders, with my approval, governing the further curtailment of power use in the Pacific Northwest.

The privately owned public utilities which serve some of the major residential loads of the region have applied to the public-utility commissions in their respecive States for rate increases amounting in some instances to 23 percent of their gross billings. These companies anticipate that the impending shortage of power from the Federal system will require them to fall back on the production of the existing steam plants in the Northwest, which can be operated only at high cost due to inefficiency and obsolescence. The surcharges which they request, and which are now under consideration by the regulatory authorities of the States of Oregon, Washington, and Idaho, are designed to shift the increased cost of producing power during the emergency period to their customers.

The people of the Pacific Northwest look to the generating facilities constructed at Grand Coulee and Bonneville for a major portion of their present supply. As the economy of the region expands they expect to derive power to sustain this expansion from Federal hydroelectric facilities now under construction or proposed. These total 5,671,600 kilowatts including Hungry Horse with 285,000 kilowatts, McNary with 980,000 kilowatts, Chief Joseph with 1,152,000 kilowatts, and Libby with 588,000 kilowatts. These projects will begin to produce power beginning with Hungry Horse in October 1952, to Libby in September 1958. I am submitting for the record a list of the projects discussed above.

List of Federal projects

Project	Kilowatt capacity	First date in service	Project	Kilowatt capacity	First date in service
Albeni Falls	42,600	August 1954.	Hills Creek	20,000	December 1955.
Hungry Horse	285,000	October 1952.	Upper Scriver Creek [1]	30,000	September 1955.
Detroit	100,000	June 1953.	Chief Joseph	1,152,000	December 1955.
Big Cliff	18,000	December 1953.	Hells Canyon [1]	800,000	August 1957.
American Falls	30,000	November 1954.	The Dalles	980,000	November 1956.
McNary	980,000	December 1953.	Palisades	114,000	January 1957.
Lookout Point (Meridian)	115,000	July 1954.	Garden Valley [1]	60,000	July 1957.
Dexter	15,000	December 1954.	Lower Scriver Creek [1]	60,000	September 1955.
Roza	10,000	July 1954.	Libby	588,000	September 1958.
Chandler	12,000	December 1954.	Total	5,671,600	
Ice Harbor	260,000	December 1955.			

[1] Proposed but not approved.

The condition of chronic shortage resulting from the abnormal load growth has been made more acute by the requirements of defense. It is necessary to the defense effort that the Pacific Northwest provide a large proportion of our aluminum output. At present, 40 percent of BPA's power supply is taken by aluminum plants. A crucial service is also rendered to the atomic installation at Hanford. Power is also supplied from the Federal system for the production of aircraft and magnesium, phosphorus, chlorine, and other critical materials. The power curtailment means that many of these defense activities will suffer along with the regular civilian activities of the region.

This is the background against which we are today making our recommendation for the authorization of fuel-fired electric generating plants to improve the situation of defense industries in the Pacific Northwest. The legislation proposed provides that the output of these plants shall be used during the defense period in accordance with the Defense Production Act of 1950. Thereafter, such generation will be used to support the regional power supply. These fuel-fired plants have special merit because they can be built more rapidly than major hydroelectric installations on the Columbia River system. This means they will give more immediate aid in a critical water year.

The Columbia River power system produces both firm and secondary power. It has this characteristic in common with all other hydroelectric systems although the proportion of secondary power is much less on the Columbia than in virtually any other river.

This is because of the Columbia's great reliability of stream flow. Fuel-fired electric generating facilities are needed in any hydro system to improve the economy of operation.

At the present time, and for a very long period in the future, pending the construction of a tremendous volume of storage in many projects in the upstream reaches, large blocks of secondary power will continue to be produced in the Columbia River system. This secondary power has much less value than firm power because it must be utilized, if at all, on an interruptible basis. Hence some of it may be wasted from time to time. The fuel-fired plants will add reliability and value to the secondary power and will enable much of it to be sold as firm power.

To be specific, the 400,000 kilowatts of fuel-fired generation facilities will make firm 400,000 kilowatts of secondary power. The studies which will be presented to this committee will demonstrate that over a period of years firm power resources of the Pacific Northwest can be increased by 400,000 kilowatts through utilization of secondary hydroelectric power for approximately 75 percent of the time and use of the fuel-fired generation to supply only 25 percent. Such joint operation produced marked economy for the fuel-fired installation.

I wish to emphasize also that, beyond contributing these additions to the Pacific Northwest's power supply and the national defense, these fuel-fired plants will become integral parts of a system, the investment in which is completely reimbursable.

The Government will get back in direct payments every dollar of its investment, with interest, in fuel-fired plants just as the Government is now being repaid its investment in the power facilities of Bonneville, Grand Coulee, and the Bonneville transmission system. In this respect the public investment in power facilities for which we are here recommending authorization is of a completely different nature from expenditures for many other governmental operations. In effect, any moneys which may be appropriated as a result of the authorization of steam plants are merely a loan with which to construct self-sustaining facilities which in due course of time will repay the loan with interest.

In 1935, the Federal Government produced a negligible amount of power in the Pacific Northwest. By 1940, 10 percent of the total power installation was in Federal facilities. At the end of 1950, out of a total of 4.7 million kilowatts, 46 percent was Federal power. This has been a logical outgrowth of the economic factors which govern the production of power in the Northwest. These economic factors are unique to this region, and they enable the generation of power at far lower cost than in most other places in the United States. In the past the region has had almost complete dependence on hydroelectricity as opposed to fuel-generated power. We do not contemplate any radical change in this situation as the result of this steam-plant legislation.

But the fact that more than 90 percent of the power capacity in the Pacific Northwest is hydroelectric as compared with an average of 22 percent in the rest of the country makes the regional power facilities highly vulnerable to reduction in output during the infrequent years of low runoff.

While fuel-generated power is more expensive than the low-cost hydroelectric power from Bonneville and Grand Coulee dams, it can be used economically as a supplement to hydro. Low-water periods are a constant threat to the region, and power from Bonnevilel and Grand Coulee Dams, it can be used economically as a additional facilities are needed for use in those periods, thus firming up some of its interruptible power. Even so, there will still be additional interruptible and secondary energy.

If there were low-cost fuel-fired plants in the rfegion at the moment, they would now be used in addition to existing higher-cost electric plants to guard against the curtailment of defense activities and the loads of the utilities. This form of insurance will continue to have its place in the region as part of the further development of the power capabilities of this great river basin.

Finally, I should like to give you a picture of the financial results of the power operations of the Federal Government in the Northwest to date. As of June 30, 1951, the Federal Government had invested in generating and transmission facilities in the Northwest $457,900,000. It has earned revenues of $225,000,000 since the beginning of its operations from these two Federal dams, Bonneville and Grand Coulee.

These revenues have covered all operation and maintenance expenses to date plus $37,600,000 for depreciation on the property, plus $55,700,000 for interest on the investment, and the Government has left net revenue as a surplus, after payment of all of these charges, $69,100,000.

For the fiscal year ending June 30, gross revenues were $36,200,000; after the payment of operating expenses, depreciation, and interest on the investment, the net revnues this past fiscal year were $14,500,000.

In other words here is a business whose net revenues at the end of the year's operation amounted to 40 percent of its gross revenue. These net revenues are being used by the Government to amortize the investment in the projects.

As of June 30 of this year, the schedule for the amortization of the Government's investment in these projects had been met at a rate twice as fast as necessary to amortize over a 50-year period.

A tremendous benefit to the economy of the region and of the Nation cannot be measured in dollars and cents, but the experience we have had in the operation of this program in the Northwest now demonstrates beyond any reasonable doubt that this power program is a self-liquidating program and is in no sense a burden upon the taxpayers of the United States.

The steam and gas turbine plants which we are asking for in this authorization bill will add to the financial security of the entire program—that portion already built and those portions still to be constructed. These new fuel-fired electric plants will cost $60,000,000, every dollar of which will be repaid with interest in 30 to 35 years.

The Federal power program in the Pacific Northwest has been of tremendous value to the entire United States. The fuel-fired plants which would be authorized under H. R. 4963 are essential to maintaining the great contributions of these facilities to the Nation during the present critical years in our country's history and for many years to come.

(Thereupon, at 12:45 p. m., the hearing was recessed, to be resumed at 3 p. m. this date.)

AFTER RECESS

Mr. LARCADE. The meeting will come to order for the further consideration and hearing under H. R. 4963, and the next witness will be Dr. Paul J. Raver, of the Bonneville Power Administration. Do you have a prepared statement, Doctor?

STATEMENT OF DR. PAUL J. RAVER, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION

Dr. RAVER. I do have a prepared statement; and, after listening to the very excellent presentation of Congressman Jackson and Secretary Chapman this morning, I do not feel that I have anything that can be added.

I would like to file not only the prepared statement that I have myself, but I have with me some of my principal assistants, and they have prepared statements. If I may do so, I would like to file the prepared statement of my chief engineer, Mr. Schultz, which is on the engineering aspects of this proposal; and a prepared statement

by Dr. William A. Dittmer, power manager of the Administration, on the aspects of marketing the power from these plants; and a prepared statement by Mr. Earl D. Ostrander, the controller of the Bonneville Power Administration, on the financial aspects of this proposal.

These gentlemen are here, together with our general counsel, Mr. Norman Stoll, for any questions you might ask us.

If it is agreeable to you, rather than making any further statements, I shall just file these.

Mr. LARCADE. I think that will be agreeable, Doctor. We would be very glad to have your colleagues and assistants either appear and file these statements personally or their appearance will be noted and your statement, the statements of Dr. Paul J. Raver, Bonneville Power Administrator; Mr. S. E. Schultz, chief engineer; Dr. William A. Dittmer, power manager; and Earl D. Ostrander will be included in the record at this point.

(The statements referred to are as follows:)

STATEMENT OF DR. PAUL J. RAVER, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION

I have come before the committee today to testify concerning the bill to amend the Bonneville Act making provision for the construction of certain fuel-fired electric generating plants in the Pacific Northwest. It is my purpose to explain briefly what the effect of this bill will be on the duties of the Bonneville Power Administration and what the need is for the construction of these fuel-fired electric generating plants.

The bill is in the form of an amendment to the Bonneville Project Act, and it adds a new section to the act. This new section authorizes the Secretary of the Interior to construct and operate three steam electric generating plants at suitable locations in the area. These plants would have a capacity of approximately 100,000 kilowatts each.

In addition to these plants, the bill also makes provision for installations of gas-turbine electric generators at five locations in the Pacific Northwest. These would have a capacity not exceeding 20,000 kilowatts each.

The other provisions of the bill are to govern the marketing of the power produced at these plants, the pooling of the power generated with the other federally generated power in the region, and the making of rates to accomplish these purposes. These provisions provide for the repayment of the Government's investment in the facilities so that they will be self-liquidating along with the other power facilities in the region. Clear statutory authority is spelled out for pooling all obligations assigned for repayment out of power revenues from Pacific Northwest projects, including the fuel-fired generating plants proposed, and establishing the lowest possible uniform rates in order to liquidate these obligations.

At present the Bonneville Project Act authorizes the construction of certain elements of electric-utility plant by the Bonneville Power Administration, and under this authorization we have constructed transmission lines, substations, and related facilities, at an original cost, including interest on construction, amounting to $194,000,000 (June 30, 1951). We have not interpreted the act as conferring authority to construct generation facilities such as those contemplated in this bill. It is now timely to enlarge the authorizations given so as to make it specific that these fuel-fired plants may be constructed.

We need to build these plants in the Pacific Northwest because an increased power supply is an urgent necessity to meet the rapidly growing requirements of distribution systems, Federal agencies, and defense industries throughout the area. It is the responsibility of the Federal power-supply system, consisting of the hydroelectric generating plants and the Bonneville Power Administration power-marketing system as the major source of supply throughout the area, to meet the needs for defense industrial power. The fuel-fired plants can be constructed in a much shorter time than any other form of equivalent generation.

We need these steam plants and gas-turbine plants in order to convert the secondary power which is now produced at the Columbia River hydroelectric plants to firm power. Production of electricity by water power in periods of good stream flow can exceed the production available in a critical year. The excess thus produced is secondary power, which can be sold, if at all, only as interruptible power, to be curtailed in a period of low stream flow. The plants will continue to be useful as a source of power to supplement seasonal water and low stream flows in critical periods which occur on an average of once in 6 years on the Columbia. The building of the proposed plants will add 400,000 kilowatts of new firm power capacity.

Our engineering analysis indicates that for most efficient and economical operation these plants should be located at the extremities of the Federal transmission grid and at load centers.

Such locations will permit substantial dollar savings to the Government by making unnecessary some transmission construction which would otherwise be scheduled to meet statutory requirements upon the Government for minimum service. Our estimate is that the gross dollar saving in annual transmission costs will be between $1,350,000 and $1,800,000 for the three steam plants and an additional $1,000,000 for the gas-turbine plants. The saving will offset in large measure the higher production cost of steam-generated power.

The present power supply situation in the Pacific Northwest is a matter of great gravity. I cannot stress too much the importance of starting this program of construction as quickly as possible. It is not a matter of triviality that defense production is imperiled in the Northwest at the very moment. The water conditions of the Columbia River system are less favorable in this September than in any September of recent years. The production of aluminum for defense purposes has already suffered a set-back as the result of this adverse stream flow situation. Furthermore, this uncertainty which results from the unpredictability of weather conditions over the wide expanse of territory from which the waters of the Columbia are accumulated poses a constant threat which hangs over the defense productivity of the region.

Time is the essential quality in meeting defense needs. If we begin the construction of gas turbine plants immediately, they would provide a part of the needed capacity by the autumn of 1953, and the first steam plant, if started immediately, can be in operation by the winter of 1954. In this respect these fuel-fired plants have decided advantages over major hydroelectric projects which might be started at the same time. This does not mean in any respect that the fuel-fired plants can be substituted for additional multipurpose dams, reservoirs, and hydroelectric projects. Construction of the latter continues to offer the most feasible and economical method of meeting the needs for the longer-range time required for their construction and they should be constructed in accordance with schedule T of the Bonneville Power Administration.

Finally, I wish to repeat that the amendment to the Bonneville Project Act makes full provision for the fixing of rates, which will repay the Federal investment. The principles which will govern the fixing of these rates are those set out in the Bonneville Project Act. This means in effect that the rates which will be charged for power produced by the system as a whole will have to be sufficient to cover the costs incidental to operating the entire system of generating plants and transmission facilities and to repay to the Federal Treasury its entire investment with interest. A witness who will follow me will explain the accounting principles upon which this will be accomplished.

We have anticipated methods of determining average costs and adjusting rates so that they will be adequate to return to the Treasury the true annual costs of operating the properties and the capital investment over a proper period of years.

STATEMENT BY S. E. SCHULTZ, CHIEF ENGINEER, BONNEVILLE POWER ADMINISTRATION

ENGINEERING STUDIES OF FUEL-FIRED GENERATION FOR THE PACIFIC NORTHWEST

Studies by the Bonneville Power Administration to increase power resources and relieve the critical power situation in the Pacific Northwest show—

(1) That fuel-generating capacity can be installed in from 2½ to 4 years less time than new Federal hydroelectric generation, over and above the generation contemplated in the present Federal program for the region, and

(2) That approximately 400,000 kilowatts of fuel-generating capacity in plants at favorable locations on the Federal system and in coordination with the hydrogeneration would have little, if any, adverse effect upon Bonneville's rates or its economic operations.

Generally, it is contemplated that of the 400,000 kilowatts of fuel-generating capacity, approximately 300,000 kilowatts would be in steam turbines, and 100,000 kilowatts in gas turbines.

STEAM-TURBINE PLANTS

Three steam plants are contemplated, each rated at approximately 100,000 kilowatts and located at a load center of sufficient size to absorb in its immediate area the full output of the plant. To achieve a maximum of transmission savings, the selected load centers would be at the more remote locations from the Federal dams. Present investigations reveal that the three most favorable locations would be in the Coos Bay-North Bend area of Oregon, in the Longview-Centralia area of southern Washington, and in the Puget Sound-Olympic Peninsula area of northwest Washington. It is possible, however, that further studies might show even more favorable locations than those indicated.

The plants would be of relatively simple design, each consisting essentially of a boiler, turbine generator, and transformer connected to the 115,000-volt system.

Since they would function as an adjunct to the Federal power grid and would at all times be supported by the transmission system, some features otherwise needed for continuity of service could be omitted in the interest of savings, without unduly sacrificing reliability of service.

For the purpose of our studies it was assumed that the plants would be fired with fuel oil. However, it is contemplated that they would be designed for the possible use of coal, at some additional cost for the necessary ash- and coal-handling facilities.

The steam generation would function to (*a*) firm up the hydroelectric power by operating at base load during low water conditions, (*b*) reinforce the transmission system by providing peaking capacity or spinning reserves, (*c*) meet emergency situations, and (*d*) displace, to the extent of availability, existing high-cost steam generation.

It is estimated that the proposed steam generation would operate at the equivalent of its full capacity from 25 to 50 percent of the time. This would justify plants of high (but not necessarily the highest) efficiency in accordance with modern designs and practice.

GAS TURBINES

One of the outstanding developments of World War II was the improvement in technology relating to turbo superchargers and jet engines for military aircraft. This same technology has given impetus to the use of gas turbines for a number of industrial purposes including oil refinery processes and electric utility operations.

Although not as efficient electric power producers as the most modern steam-electric plants, the gas turbines afford relative advantages for other specific functions. They come in small and compact units and can be quite readily installed at low cost. They can be used in locations where condensing water problems might preclude steam generation. They can be started and stopped quickly. They require comparatively little attention and can operate effectively in the more isolated locations. They are in a large measure adaptable to automatic operation and remote control. Advice from at least one manufacturer is that they can be manufactured and installed in approximately 2 years' time.

Our studies show that five gas turbine installations, each not exceeding 20,000 kilowatts in capacity, could be effectively used on the Bonneville system. These installations would be located at the extremities of the system so as to achieve maximum transmission savings.

As in the case of the steam plants, the gas turbines would function to (*a*) firm up the hydroelectric power by operating at base load during low water conditions, (*b*) reinforce the transmission system by providing peaking capacity or spinning reserves, (*c*) meet emergency conditions, and (*d*) displace, to the extent of availability, existing high-cost steam generation.

Because of their relatively high consumption of oil per kilowatt-hour, and because of other inherent characteristics, the gas turbines would be used less for energy producing but more for peak loading purposes than the steam turbines.

Bonneville Power Administration—Statement of Loads and Resources in the Northwest, 1951 to 1957

(Presented by William A. Dittmer, power manager)

Dr. Raver stated that the power shortage in the Northwest is the principal reason for the construction of fuel-fired capacity in that area. I would like to give you some of the pertinent facts in this connection. The Northwest depends for its power supply largely on hydro power generated from its streams, of which the Columbia River is the largest. The characteristics of these streams are that in every year there is plenty of water to run all available generators during the spring and summer period from about April to September. During the balance of the year from October to March, however, stream flows vary greatly in different years and usually need to be supplemented by the use of water which is stored in reservoirs for that purpose.

Firm electric power is considered to be the amount of power which can be supplied at all times. In a hydro area such as the Northwest this is the amount of power than can be produced with the water available in the most critical year of record. For the Northwest this was the year 1936–37. In years which have better water supplies than 1936–37 additional power is available from the increased stream flows and this power is usually called secondary power. This can be sold only on an interruptible basis, because if critical water conditions should recur it would be necessary to cut off this portion of the load.

This year the amount of power available in the Northwest under critical water conditions will not be sufficient to supply the firm loads in that area. Bonneville has not committed itself to deliver more power than it can supply under critical water conditions, but due to the fact that the installation of new generating facilities has not been able to keep up with the load growth in the area there is a substantial shortage on the systems of the private utilities. The amount of this shortage on the basis of critical water was estimated at about 300,000 kilowatts for the 6-month period October to March of this year. However, water supplies currently are somewhat better than critical and water conditions in the Missouri Valley have been exceptionally good. Since the Northwest is able to import energy from Montana the additional supplies available there can be applied to relieve the shortage in the Northwest. On the basis of these facts our present estimate of the firm power shortage in the Northwest for this season has been reduced from about 300,000 kilowatts to about 230,000 kilowatts. This is on the basis of all interruptible loads being curtailed in accordance with contracts. Since the Defense Electric Power Administration has ordered that part of the interruptible load for the production of magnesium, chlorates and other chemicals must continue to be served in the amount of about 35,000 kilowatts, the present estimate of shortage, including these interruptible loads which must be served, is about 255,000 kilowatts. Stream flows in the west are declining, and if that should continue severe curtailment will be required. The Defense Electric Power Administration has already issued an order setting up the pattern of curtailment, but postponing until needed application of some of the provisions for carrying out actual curtailment of loads in addition to interruptible.

As of the present time, we are still serving about 130,000 kilowatts of interruptible load out of a total of 250,000 but unless the present trend is changed for the better, all interruptible except for the 35,000 kilowatts which must be kept on will have to be curtailed in about a week or 10 days. Such curtailment would have to continue under critical water conditions until about the first of April. If average water conditions prevail, the resumption of service to interruptible loads may begin as early as December or January.

I have had prepared a simple chart which you see here to show the relationship of resources and loads in the Northwest during the period 1951–52 through 1956–57. This chart is in the form of two bars representing loads and resources, respectively, for each of the years. The scale at each side is in millions of kilowatts. For the year 1951-52 the total deficit of over 500,000 kilowatts you can see applies in part against firm loads and the balance against interruptible loads. The other years are arranged in the same way with the addition of potential loads. These are not included for the current year because there is no physical possibility of having any more industrial loads this year. For next year it would still be possible to have some additional potential loads ready for service, particularly the expansion of the Longview aluminum plant of the Reynolds Metals Co. and the addition of a potline to the Kaiser aluminum plant in Spokane. For later years of course there are additional possibilities.

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For the year 1952–53 the situation as shown on the chart will be considerably improved from the point of view of firm loads. There will be substantial additions to both Federal and non-Federal resources. Starting next summer the Hungry Horse and Albeni Falls projects of the Federal Government will produce power, and the Cabinet Gorge plant of Washington Water Power Co., and the Yale plant of Pacific Power & Light Co. are also scheduled to be ready for operation. There will be other minor additions. These increases will be more than enough to offset ordinary load growth in the area so that the estimated deficiency for serving firm loads next year will be reduced to about 40,000 kilowatts. On the other hand, the amount of interruptible load for which arrangements have already been made will increase to over 500,000 kilowatts. This total amount would have to be curtailed in case of critical water in addition to the 40,000 kilowatts of firm power. Therefore the total shortage next year would be about the same as this year with the difference that a larger part of it would be interruptible. In addition, there are about 100,000 kilowatts of potential loads for which service would be desirable but which cannot be accepted even on an interruptible basis because of lack of power supply.

For the following year 1953–54 all firm loads can be taken care of on a firm basis. These firm loads include an increase of 180,000 kilowatts of firm deliveries already committed by Bonneville. However, there will still be about 450,000 kilowatts of interruptible load which could not be served under critical water conditions. In addition, the amount of potential load for that year increases to 300,000 kilowatts so that the total deficit for serving all loads in a critical year is approximately 750,000 kilowatts. All of these figures are based upon full use of all resources in the Northwest, including high-cost steam, all available imports, all miscellaneous resources such as generation in lumber mills, and so forth. For 1954-55 the situation is about the same as for the preceding year, including an increase of 70,000 kilowatts of firm power for industry already committed by Bonneville. The deficit is about the same as in the previous year. In 1955–56 and 1956–57 substantial amounts of additional power will become available on the Federal system from such projects as McNary and Chief Joseph. This will permit us to supply larger amounts of firm power to industry, approximately 250,000 kilowatts per year, but the potential loads in sight will have increased to such an extent that the deficit will still be approximately the same as in the preceding years.

I would like to emphasize that the potential loads used do not include any expansion of aluminum production except the amounts which have already been definitely arranged for or discussed. In the latter part of the period covered by the chart, if firm hydro power were available we believe that there would be an additional large demand for aluminum reduction over and above the potential loads shown here. Of course, any such additional demands would increase the potential deficiency shown.

The addition of 400,000 kilowatts of fuel-generating capacity as proposed in the legislation under consideration will not alter the situation this year and the next 2 years because this additional capacity cannot be placed in service before the year 1954–55. The addition of 400,000 kilowatts of firm power at that time will make it possible to serve that much more defense load. A portion of the new capacity could be used for firming up existing interruptible loads and the balance could be used to supply additional potential defense loads which could not otherwise be supplied. The exact way in which the power can be used best to aid the defense effort will be determined as necessary by the appropriate defense agencies.

I would now like to outline briefly just how the new plants would actually be used in the operation of the system. I have already explained that the primary supply of power in the Northwest is hydro obtained from Federal dams on the Columbia River and from hydro projects of municipal and private utilities on other streams and that the amount of firm power available (that is, the power on which delivery can be assured regardless of water conditions) is based upon the stream-flow conditions during the lowest year of record, which for the Northwest is 1936–37. In all other years stream flows will be better than 1936–37 by varying amounts. This additional power is secondary power a large part of which is needed now to make up the deficiency in firm power in the area, but which will not be needed for that purpose in 1954 and succeeding years. If we install steam generating plants we will supply the additional firm load by using hydro as much of the time as we have it available, filling in with steam generation only to the extent needed. This will vary in different years. Under water conditions as they occurred in 1936–37 it will be necessary to operate the steam

plants continuously 24 hours a day during the storage draw-down period of 6 to 8 months. On the other hand, in a very wet year there will be enough power to serve all firm loads with hydro throughout the year so that the steam plants would not have to operate at all for firm loads.

We have made studies of the propable operation based upon actual water conditions which have existed over a period of some 20 years and arrived at average results. These studies are made through the use of so-called duration curves. On the basis of these studies we estimate that over a representative period of years based on average water conditions as encountered in the past, the steam plants would have to operate approximately 25 percent of the time in order to serve the additional 400,000 kilowatts of firm power which would be sold on the basis of these plants. The other 75 percent of the time hydro would be available to supply the load. This firm power we propose to sell at our regular rates averaging the costs with hydro generation and transmission. Another witness will deal with the question of costs and pay-out.

When not needed to supply firm loads the new steam generation, which would be lower cost than existing steam generation in the Northwest, could be used to supply interruptible loads when hydro was not available for that purpose and to displace higher cost steam in the area. We estimate that in addition to the firm loads about 300,000 kilowatts of interruptible loads could be served 90 to 95 percent of the time with a combination of hydro and new steam generation. Here again I would like to mention just briefly that such loads would be supplied half hydro at 2 mills and half new steam at 4 to 4½ mills, making an effective rate of approximately 3¼ mills for interruptible power available 90 to 95 percent of the time.

Average loads and resources of western group pool utilities over minimum year draw-down period, 1951–52 through 1956–57

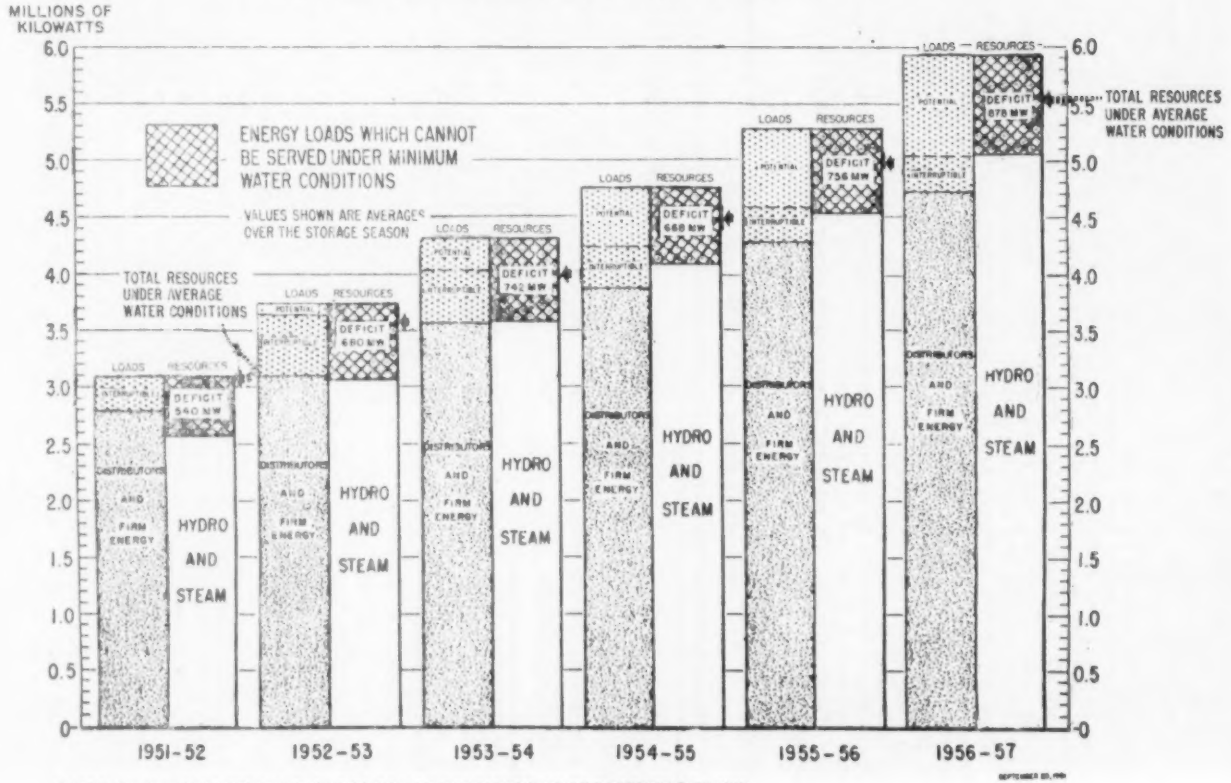
[Tabulation designed to accompany load-resource chart (thousands of average kilowatts)]

	1951–52 [1]	1952–53	1953–54	1954–55	1955–56	1956–57
Total area load at plant	3,099	3,733	4,303	4,739	5,267	5,910
Distributors and firm industry	2,789	3,092	3,551	3,855	4,264	4,709
Potential industry—not firmed		101	296	505	693	891
Interruptible industry	310	540	456	379	310	310
Total area resources at plant:						
Minimum year	2,559	3,053	3,561	4,071	4,511	5,032
Deficiency	540	680	742	668	756	878
Median year resources	3,088	3,586	3,989	4,477	4,963	5,544

[1] Based on minimum flow to follow conditions as of Sept. 25, 1951.

ENERGY LOADS AND MINIMUM YEAR RESOURCES 1951-1957

WESTERN GROUP - NORTHWEST POWER POOL UTILITIES



BASED ON MINIMUM STREAM FLOWS TO FOLLOW CONDITIONS AS OF SEPTEMBER 25, 1951

STATEMENT OF EARL D. OSTRANDER RE H. R. 4963

A. RE CONTINUING FUND

Section 11 of the Bonneville Project Act requires that all receipts from the sale of electric energy generated at the Bonneville project be covered into the Treasury to the credit of miscellaneous receipts, except that the Treasury shall establish and maintain from such receipts a continuing fund of $500,000 to the credit of the Administrator to be used by him to defray emergency expenses and insure continuous operation. Such uses or purposes, namely the defraying of emergency expenses and assuring continuous operation, would be applicable also to the operation of any new fuel-fired electric generation plants that might be constructed pursuant to H. R. 4963 if enacted.

In addition, subsection (c) of proposed section 14 extends the purposes for which the continuing fund may be used to cover all expenditures directly incident to purchase of fuel and payment of other variable costs necessary for the operation and maintenance of the fuel-fired electric generating plants that may be constructed pursuant to the authorization provided by subsection (a) of section 14 proposed to be added to the Bonneville Project Act by H. R. 4963.

The amount of funds required for the operation and maintenance of fuel-fired electric generating plants will vary widely from year to year with variations in the degree of use of such plants. One of the principal expenditures will be for fuel, which varies with the amount of energy produced.

Operating labor is also highly variable. The plants will be completely shut down at some periods, such as the summer months or other periods when ample hydroelectric power is available to carry the system loads. On the other hand, in periods of critical water conditions the steam plants will operate at full capacity.

Maintenance costs will vary with the variation in degree of use of the fuel-fired plants. The cleaning of condenser tubes, scaling of boilers, replacement of tubes, etc., are factors that will vary with usage of the plants.

In view of the highly variable rate of operations of the steam plants and the impossibility of predicting very far in advance critical water conditions (during which the steam plants and gas-turbine plants would be used around the clock to produce energy for the system), it is not practical to provide necessary funds for operation by means of the usual appropriation process in which fund estimates must be made as long as 18 months in advance of their expenditure. Accordingly, only the base of regularly recurring expenditures independent of the degree of operation would be covered by the regular budget requests. Variable costs would be financed from the continuing fund. If the entire fund requirements were to be provided by the usual appropriation process, it would be necessary to submit each year's budget estimate on the basis of the maximum possible requirements. In other words, each year's estimate would necessarily be based on an assumption of the most unfavorable load, weather, and water conditions for the ensuing fiscal year. Appropriations on that basis undoubtedly would prove to be excessive in most years. The use of the continuing fund will make available such amount of funds as may be necessary from time to time for the purchase of fuel and for other variable expenses as may be required by varying load, weather, and water conditions:

In order to maintain the plant in good operating condition, it will be necessary to repair or replace parts or items of equipment that wear out or break down. In utility accounting practice, some repairs or replacements are charged to current maintenance expenses and others are capitalized. In the latter case, the replaced part is retired from service and deducted from the capital investment (i.e., the plant account) and charged to the depreciation reserve, and the cost of the new item is charged to the plant account. Since repairs range all the way from a very minor job to the replacement of an important piece of equipment such as a condenser, a blower, a turbine, etc., the FPC has prescribed rules to govern whether the cost shall be charged to current expense or to capital. For such accounting purposes, FPC has prescribed a list of units of property which are treated as capital items when replaced. The repair of a property unit or replacement of an item composing just a part of a property unit is thus charged to current maintenance expense. Replacements are therefore sometimes referred to as extraordinary maintenance even though they occur as a normal result of operation. Since the replacement of an item of equipment that breaks down is just as important, if not more so, than repairing the equipment, it is necessary to have funds available immediately for all types of maintenance.

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BASED ON MINIMUM STREAM FLOWS TO FOLLOW CONDITIONS AS OF SEPTEMBER 25, 1951

Inasmuch as breakdowns cannot be forecast, the proposed legislation makes the continuing fund available for such costs.

The use of the continuing fund will in no way adversely affect the general policy of the repayment of power costs from operating receipts. Any amounts appropriated for expenses are repair by the deposit of receipts in the general fund, and any amounts used from the continuing fund are automatically repaid since they are financed from receipts in the first place. The continuing fund, in other words, is a continuing appropriation of receipts, and the net effect of both methods of financing is the same as far as repayment of costs is concerned. Although the continuing fund is a continuing appropriation, under existing laws and procedures all expenditures from the continuing fund are reported to the Congress in connection with annual requests for appropriations, and detailed information would be available as to all actual expenditures from the fund.

After the fuel-fired plants are once constructed and placed in service, all expenditures except the base crew and other minimum or nonvariable costs would be financed from revenues and thus paid currently. This would include fuel, additional operating personnel, and all repairs and replacement of equipment that may break down except routine maintenance. In addition, the initial capital investment would be repaid with interest from revenues over the life of the project, currently estimated at 30 years. Hence at the end of 30 years the plant would be fully repaid to the Treasury and probably would still be in a good operating condition. If the plant continued to be economically useful after 30 years, it would represent a low-cost power supply. If, however, the plant or any of its major components such as the generators or the boilers became economically obsolete, the plant could be retired or any major investment necessary to replace obsolete components would be requested by the usual appropriation process and thus subject to congressional review.

B. RE RATE DETERMINATION AND APPROVAL

Subsections (d) and (e) of proposed section 14 are procedural provisions with respect to the determination and approval of wholesale power rates to be charged for power marketed by the Bonneville Power Administration. These provisions apply to all such power, whether generated by existing or future hydroelectric plants or by the proposed fuel-fired plants.

In discussing these provisions, I will explain why rates should be fixed in the light of the Administration's combined system operations rather than on an individual project basis and why the approval of rates should be vested in the agency responsible for the power marketing and pay-out without division of responsibility for rate making between two Federal agencies. The proposed rate-making procedures are required by good power operating practice and by the marketing policies set forth in the laws under which we operate.

Subsection (d) of proposed section 14 to be added to the Bonneville Project Act provides that all costs returnable from power revenues pursuant to laws governing the pay-out of the various individual projects may be considered as a unit in fixing rates and meeting pay-out requirements. The bill specifically provides that this provision does not change in any way the existing laws with respect to standards of feasibility; the return of project costs; the availability of funds for construction, operation, and maintenance; or the disposition of receipts received from operations.

Subsection (d) merely means that all power costs, together with all nonpower costs such as the irrigation subsidy, returnable under present law from power revenues may be pooled in order to determine the over-all power rate required. In other words, the bill would recognize that our power operations are in fact conducted as a single system by making the rate and pay-out aspects of the program consistent with such system operations.

The various Federal generating plants in the Northwest are not in fact independent entities, even though some are operated by the Army engineers and others by the Bureau of Reclamation. These separate plants are tied together by the Administration's transmission network and are operated as a single integrated system in such manner as to obtain optimum power production and the most favorable returns to the Government. Such system operations make possible more efficient utilization of both storage and generating capacities of the several projects.

In like fashion the plans for construction and operation of the new dams and the transmission network are developed in the light of the integration of

individual projects into a combined system plan. This is particularly true of storage projects. The manner in which an individual storage project is operated in the combined system differs materially from the manner in which it would be operated as an isolated project. Moreover, in an integrated system operation the installation of generator capacity at one plant may be such as to meet system peak load requirements rather than to meet the isolated generating capability of an individual plant. The operation of all projects as a system is in accordance with accepted power operating practice and is the most efficient manner of handling the Government's investment.

The marketing principles laid down in the Bonneville Project Act and the Flood Control Act of 1944, which require that the power be sold so as to encourage its widespread and diversified use and at the lowest possible rates consistent with sound business principles, can best be carried out under an integrated system approach to the rate problem as well as to operations. One over-all pay-out analysis could be prepared which would take into account all power costs and all subsidy requirements in order to get total system financial requirements. These total requirements could be matched against total system production or capability in order to get the over-all or average rate required for the sale of power.

Subsection (d) thus provides clear statutory authority for such pooling of the obligations assigned for repayment ot of power revenues from Pacific Northwest projects. It would permit the adoption of the lowest uniform rate structure that would accomplish the return of such total obligations. Without such clarification of the statutes, in order to have such a uniform rate it would be necessary to assume as a matter of administrative decision or policy that while power supplies from different projects have different costs, each customer receives a pro rata share of power from each project and thus could be charged an average rate. Such a marketing policy would clearly be awkward and undesirable, nor would it conform with the actual physical operation of the system. It could lead to very poor customer relations, particularly in the case of customers closer to the lower cost sources, such as Bonneville Dam. Moreover, even this rationalization might break down with respect to our so-called at-site rate for power taken at a dam and used within a 15-mile radius.

However, unless some such assumption were adopted—in the absence of clear statutory authority—so as to effect an average rate, it would be necessary in order to have a uniform rate to fix the rate level at that required by the highest cost project. Such a rate policy would be clearly objectionable on several grounds. It would be contrary to the marketing principles of the applicable laws, it would result in a very high rate and thus penalize the power consumers, and it would have an extremely adverse effect on the development of the region's resources and economy. Moreover, many practical difficulties are encountered in determining the rate required for an individual project when the projects are not operated as isolated units but as part of an integrated system. In addition to the usual cost allocations, it would be necessary also to allocate costs of projects among other projects since storage project costs, for example, benefit downstream projects and costs at the generating project may be incurred for the benefit of system peaking purposes or in order to utilize upstream storage. In addition, arbitrary allocations would be required in order to determine the capability fairly assignable to an individual plant. Assuming that all of these various allocations of costs and capability could be worked out on an acceptable basis, results would show that for some projects the costs, including transmission, might be as low as $20 per kilowatt but two or three times that much for other projects, particularly the smaller ones, with various intermediate levels of cost such as $25 for some and perhaps $30 for others. It certainly would not be in the public interest to fix the rate for all power at the $40 or $50 level required for the highest cost project when all of the costs can be pooled and a rate of between $20 and $25 obtained for the total system.

The only other alternative to an average rate is to have separate rates for each project. This is so impracticable as to preclude it. In addition to the practical difficulties connected with the determination of the rate required for a single project, problems of customer seniority, the preferred position of the geographical accident of location with respect to various power sources, the preference and priority clause, etc., would make contract negotiations extremely difficult and would result in highly unsatisfactory customer relations under such a policy.

Subsection (d) will make no change in the financial requirements of any project. The costs assigned for repayment out of power revenues at any project will

be determined solely by the laws applicable to that project. But the costs assigned for repayment out of power revenues at the several projects will be added together, and the lowest possible uniform rate to liquidate the total of those costs can be established. The bill does not, of course, preclude the subsequent establishment of a Columbia Basin account along lines to which Bonneville Power Administration, the Bureau of Reclamation and the Department in general are committed. This bill is not a substitute for the broader basin account legislation.

The bill will be applicable to the fuel-fired plants to be authorized in subsection (a) and to future Federal projects in the Pacific Northwest for which the Bonneville Power Administrator or his successor is designated the marketing agent. The Secretary of the Interior has expressed his intention to designate the Administrator the marketing agent for all Federal projects in the Pacific Northwest, so ultimately the section will be applicable to all Federal projects in that region.

Subsection (d) relates only to accounting for rate and payout purposes. It will in no way affect the flow of funds to and from the Treasury. Receipts must be paid into the appropriate funds in the Treasury under applicable laws, and, except insofar as the continuing fund is amended by subsection (c) of proposed section 14, existing appropriation procedures remain undisturbed.

Under subsection (e) of proposed section 14, power rates will be fixed by the Secretary of the Interior without approval by the Federal Power Commission, which now approves rates for some of the projects for which the Administrator is the marketing agent. This change is deemed necessary because of the impracticability of continuing the present division of responsibility between two agencies for approving power rates for what is actually a single system, although consisting of many plants.

Power rates for Grand Coulee are established under the reclamation laws exclusively by the Secretary of the Interior. The same is true with respect to other existing reclamation projects, such as Minidoka, Black Canyon, and Anderson Ranch, which eventually will be interconnected with the Columbia River system, and also with respect to other authorized reclamation projects, such as Roza, Chandler, Palisades, and American Falls, at such time as they are constructed. Similarly, power rates for the Hungry Horse project are established under the Hungry Horse Dam Act exclusively by the Secretary of the Interior.

On the other hand, power rates for the Bonneville project are established, and for the McNary project and the various dams in the lower Snake River project will be established, under the Bonneville Project Act and the River and Harbor Act of 1945 by the Bonneville Power Administrator, subject to confirmation and approval by the Federal Power Commission. Power rates for Chief Joseph, The Dalles, John Day, Libby, and Albeni Falls projects and for the various dams in the Willamette Basin project, all of which are presently authorized, will be established under the Flood Control Act of 1944 by the Secretary of the Interior, subject to confirmation and approval by the Federal Power Commission.

This division of responsibility with respect to power rates for the component dams of a single system cannot be justified. Up to the present time no serious trouble has been encountered, but the likelihood of difficulties in the future will be greatly enhanced by the expansion of the present two-dam system to a system involving 15 or 20, or more dams. If the rate-making agencies do not agree on rates, a most difficult situation will result. Power which is sold from the transmission system cannot be earmarked as having been generated at one project instead of others, and it would be possible only by a series of arbitrary assumptions to exercise different rate-making criteria for power from different generating stations in the system. In addition, the various generating plants will not be operating the same percentage of time during any given day, week, month, or other period. The most efficient operation of the system will require constantly changing use of the various generating plants. It is clear that the agency or agencies concerned with the establishment of rates must be the same for all dams which are parts of a single system.

The bill, for a number of reason, places that rate-fixing responsibility upon the Secretary of the Interior for all projects for which the Bonneville Power Administrator is the marketing agent, rather than requiring rates for all such projects to be confirmed and approved by the Federal Power Commission.

1. Under the acts above outlined, the function of the Federal Power Commission is limited to confirming and approving rates established by the Secretary

of the Interior or the Bonneville Power Administrator. The Federal Power Commission has no continuing supervision over those rates and cannot require changes to be made if it deems the rates to be too high or too low. It has only a veto power over rates proposed by the Secretary of the Interior or the Administrator. At the time the Congress was considering the bill which became the Bonneville Project Act, the Federal Power Commission itself pointed out the undesirable and uneconomic aspects of this approach and recommended either that it be relieved from any responsibility with respect to rates or that its control over rates be made adequate, effective and complete, if Congress felt it should be charged with this responsibility.[1] This continues to be the view of the Federal Power Commission, which made a recomendation to the President's Water Resources Policy Commission in 1950, that, based upon more than 10 years' experience under the terms of the Bonneville Project Act, its supervision and control over the rates to be charged by Federal Agencies either be eliminated or made complete.[2]

2. The regulatory function of the Federal Power Commission is wholly unrelated to the supervision of the rates of Federal agencies. That function is exercised in order to protect consumers from the imposition of unreasonable rates. Federal projects are not operated for profit and the prevention of excessive charges is not a major problem with respect to them. The normal regulatory duties of the Federal Power Commission are incompatible with rate control over Federal agencies, which is exercised for the purpose of insuring an adequate return of cost and investment to the Federal Treasury. In fact, the Federal Power Commission would be better able to carry out its duties with respect to regulating the rates of the non-Federal agencies if it should be relieved of any responsibility with respect to the rates of Federal agencies. In 1950, the Federal Power Commission recommended to the President's Water Resources Policy Commission that it be relieved of this responsibility[3] and the same result has been recommended by both the Task Force on Regulatory Commissions of the Hoover Commission[4] and the President's Water Resources Policy Commission.[5]

3. Approval of power rates is inherently connected with allocations of costs, as the investment to be retired out of revenues derived from power rates is directly dependent upon allocations of costs. The financial feasibility of many reclamation projects is directly determined by the allocation of costs between various purposes, including power and irrigation, by establishment of favorable rates for pumping power and by assigning for repayment out of power revenues that portion of the costs allocated to irrigation which is in excess of the ability of the water users to repay. The Federal Power Commission, having no experience or background in reclamation matters, is not in a position to review these phases of reclamation projects, and the Congress has vested these functions exclusively in the Secretary of the Interior.

Since (1) the rates for all projects in a single system must be fixed by the same agency, (2) the fixing of rates for reclamation projects in the Columbia River power system has been vested in and must remain exclusively with the Secretary of the Interior, and (3) the Federal Power Commission, the Task Force on Regulatory Commissions of the Hoover Commission and the President's Water Resources Policy Commission all have recommended that the Federal Power Commission be relieved of any responsibility with respect to rates charged at Federal projects, the bill vests such responsibility in the Secretary of the Interior.

C. COSTS OF FUEL-FIRED ELECTRIC GENERATING PLANTS AND EFFECT OF ADDING 400,000 KILOWATTS OF FUEL-FIRED CAPACITY TO THE FEDERAL POWER SYSTEM IN THE PACIFIC NORTHWEST

An analysis of the costs of producing electrical energy in fuel-fired generating plants establishes quite clearly that such plants—at least at the present stage of their development—are far less desirable from an economic or financial standpoint than hydroelectric plants as the basic source of power supply for the Pacific Northwest. Inasmuch as this area is particularly fortunate in having

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[1] Senate Rept. No. 919, 75th Cong., 1st sess., Completion, Maintenance, and Operation of Bonneville Project, Oregon, letter of May 12, 1937, p. 2.
[2] Report of the President's Water Resources Policy Commission, vol. I, p. 244.
[3] Ibid.
[4] Report of the Commission on Organization of the Executive Branch of the Government, Appendix N, pp. 125–126.
[5] Report of the President's Water Resources Policy Commission, vol. I, pp. 244, 246.

an unusually favorable hydroelectric resource, its power supply has always been predominantly hydro. Both before and since the advent of the Federal power program the bulk of the generation has been at hydro plants. Nevertheless, most of the larger non-Federal utility systems in the Northwest, both privately and publicly owned, have some steam plant capacity to supplement hydro generation in critical water periods and to meet peak loads.

Despite the general premise that steam plants are more expensive than hydro for base power supply in the area, a limited amount of fuel-fired capacity, if properly located with respect to loads and the transmission system, will fit into the Federal power system and have continuing value to it without a substantially adverse effect on total system costs and the required level of wholesale rates.

The amount of power that can be sold under contracts assuring a continuous or firm power supply is based on the most critical water conditions of record in the case of a predominantly hydro system. In most years, and at certain seasons all years, the hydro capacity exceeds critical values. This excess supply is known as secondary energy. It normally has a limited market and is thus less valuable than firm power. An analysis of the Federal hydro system indicates that, in addition to prime power, about 400,000 kilowatts of secondary is available about 75 percent of the time. This means that by adding 400,000 kilowatts of fuel-fired capacity to the system we can then contract to sell 400,000 kilowatts more prime power but in order to do so it would be necessary to operate the steam plants only about 25 percent of the time.

An important consideration in the installation of fuel-fired plants in the Federal system is their location. By placing such plants at the points farthest from the hydro plants, important savings in transmission costs and losses can be obtained. For example, one steam plant would be located in the Coos Bay, Oreg., area, which is from 300 to 500 miles from Grand Coulee, Chief Joseph, McNary, or the other large Federal hydro plants. The steam plant at Coos Bay could reduce the amount of transmission capacity otherwise required in the area. It would also reduce losses of energy in the transmission system.

By using the fuel-fired plants on the average 25 percent of the time to supplement the 400,000 kilowatts of secondary hydro available 75 percent of the time we will obtain for the Federal system 400,000 kilowatts of additional prime power that can be sold under firm power contracts. Obviously, additional prime power can also be obtained by installing new hydro capacity. Therefore, we have compared the costs of obtaining the 400,000 kilowatts of additional prime power by two methods. We estimate that new hydro power supply will cost about $18.50 per kilowatt of prime power at the dam, or a total of $7,400,000 for 400,000 kilowatts. The estimated average annual costs of the fuel-fired plants based on using them 25 percent of the time is $8,563,300 but since secondary hydro energy would supply the other 75 percent we have added a value of $2,628,000, or 1 mill per kilowatt-hour, for the secondary hydro. It actually costs substantially nothing to generate the secondary hydro but since at least part of it normally could be sold we have given it a value for purposes of comparison. The total annual cost of the fuel-fired plants including this allowance for secondary hydro is therefore $11,191,300, but savings in transmission costs and losses with the fuel-fired plants are estimated at $2,932,000, making a net cost of $8,259,300. This net total exceeds by $859,300 the estimated cost of 400,000 kilowatts of new Federal hydro capacity, but over the life of the steam plants this excess will amount to only about 15 to 20 cents per kilowatt.

A similar study based on the addition of only 300,000 kilowatts of fuel-fired capacity shows that the comparative annual costs are just about identical.

A similar study based upon the addition of only 200,000 kilowatts of fuel-fired capacity shows that the comparative costs with the fuel-fired plants are $513,500 less than the costs of 200,000 kilowatts of new hydro capacity.

The reason for the better showing with reduced amounts of fuel-fired capacity is that greater savings in transmission costs and losses are effected by the gas turbine plants and the first steam plant since these would obviously be located in the most favorable places with respect to transmission distances.

Even though 400,000 kilowatts of fuel-fired capacity is installed to firm up an equal amount of secondary hydro there would still be some secondary hydro available although for a smaller portion of the time than 75 percent. Nevertheless, part of this additional secondary probably could be marketed on an interruptible basis and when it was not available energy from the steam plants could be supplied a good deal of the time. Hence, industries would be able to get a combination of secondary hydro and Federal fuel-fired energy for a good portion of the time. Since we would absorb the fixed costs of the fuel plants as part of the cost of the

Federal power supply, we could make available fuel-generated energy to interruptible customers at incremental cost, which is estimated at 4 to 4½ mills after allowing a nominal amount for costs of administration, contracts, billing, etc. When this 4- to 4½-mill energy is averaged with secondary hydro at about 2 mills, the over-all cost to interruptible industrial loads would still be comparatively low.

Dr. RAVER. Very well, sir. We will be glad to submit ourselves for such additional questions as you might like to ask any one of us.

Mr. LARCADE. Any questions at this time by the gentleman from Michigan?

Mr. DONDERO. I have just one or two, Dr. Raver. Have you requested or has the Department of the Interior requested at any time that steam plants be built in the California area and also in the southwest part of the country, under the Southwestern Power Authority, or the Southeastern, and have those requests been denied?

Dr. RAVER. I have not requested that such plants be built in any of those areas. They are outside of the area of jurisdiction of the Bonneville Power Administration.

Mr. DONDERO. Well, have you any information regarding whether such requests have been made and whether such requests have been denied?

Dr. RAVER. I am not informed about it. I have heard some discussion about the possibility of steam plants being needed in those areas, but I do not know whether any request has been made or not.

Mr. DONDERO. Do you think that every effort has been made and every source has been exhausted to find some other way to produce whatever power you think is necessary besides building these steam plants in the area in which you now operate?

Dr. RAVER. Every effort has been made and is being made to meet the situation. I might state that a year ago the Bonneville Power Administration prepared for the Defense Electric Power Administration a defense proposal for securing additional power supplies quickly in the northwest region. That proposal was developed cooperatively with the private utility companies and the public agencies of that region and included a number of hydroelectric dams that could be built by the private utilities and a couple that could be built by the public agencies and included also a proposal that the Federal Government put in some steam plants. That proposal was made a year ago in an effort to find the quickest new generating facilities that could be developed in that region to meet the very situation that we are facing today. Some of those recommendations which we made at that time are being sucessfully prosecuted at the present time and some of them are not.

Of those that are being successfully prosecuted, I might mention two—the Yale project of the Pacific Power & Light Co. on the Lewis River was one of the private utility company proposals which we recommended, and we assisted that company in getting the necessary authorizations from the Defense Electric Power Administration. That plant is being built now on the Lewis River, close to the coast, a very desirable location from the point of view of the load center and from the point of view of the water conditions there, and it will be completed some time next summer or early fall.

The Cabinet Gorge project of the Washington Water Power Co. on the Clark Fork River, on the boundary line between Idaho and Washington, was another one of the so-called quick projects that we

recommended, and we assisted that company in every way that we could in getting started. That project is being constructed today and will be completed likewise next fall.

None of the other projects so far have been started that we recommended at that time.

Mr. DONDERO. Will the program of the Government be sufficient in the hydroelectric field to provide the power necessary without setting up these eight steam plants that you have in mind—that is, by either using private, municipal, or other hydroelectric power that might be in the area.

Dr. RAVER. Well, the fact is, Congressman, we need not only everything we have recommended but the steam plants in addition. The growth in demand for power in that region is so great that we need both of them. Now, that is the only logical answer. It is not one or the other in our opinion. We have to raise our sights on this whole matter of providing power supplies for that region. We have been stumbling along too long.

Mr. DONDERO. Would you say that private enterprise is either unwilling or unable to do it?

Dr. RAVER. Private enterprise is doing everything that it can and I think everything that it feels it logically should in that area which the unique water situation and the multiple-purpose control of that river system requiring Federal dams enables it to do. In other words, under that kind of a situation I think they feel they are doing everything that they should be expected to do or can do.

Mr. DONDERO. Would you say this bill sets a precedent in building steam power plants to supplement hydroelectric power?

Dr. RAVER. So far as precedent is concerned, it is a commonly accepted principle in the industry to do that.

Mr. DONDERO. I mean as far as the Federal Government is concerned. The only excuse for the Federal Government going in the power business, as I recall it, is that it can only come in based upon one of two reasons—either that it is for the national defense or that it is produced incidental to flood control and navigation. Those are the only two reasons. Is that not true?

Dr. RAVER. I think that is correct.

Mr. DONDERO. Now, you have got to come in under the national defense in this case because there is very little flood control as described by the gentleman from Washington because of the nature of the Columbia River Valley. Therefore, national defense or emergency is the only reason that you are coming in here asking for the development of more power. To do that, you want to establish steam plants. I am asking you if that is not precedent in this country, outside of the one plant in the TVA, which is a separate and independent agency.

Dr. RAVER. The TV, however, is a precedent for the Federal Government doing it.

Mr. DONDERO. It is in principle, only that it is done there by an agency that stands above the American Government. But so far as the Department of Interior is concerned, all requests for steam plants have thus far been denied.

Dr. RAVER. Congressman Dondero, I am not an attorney so I will not try to answer the question as to whether this is a precedent for

the Federal Government legally or not. From a business point of view——

Mr. DONDERO. Well, I am only after the facts and not the legal phase of it.

Dr. RAVER. I am sorry. I have lost the trend of thought.

Mr. DONDERO. All previous requests for the establishment of steam plants on the part of the Department of the Interior have thus far been denied. You can answer that yes or no very easily.

Dr. RAVER. My only answer to that is I do not know, because that is the truth.

Mr. DONDERO. If a great shortage of power exists in the northwest, why do you think that the three dams have been turned down by Congress thus far. I named them this morning and I think you were here. They are Albeni Falls, Ice Harbor, and The Dalles.

Dr. RAVER. I suspect they have been turned down because there was not an adequate presentation made to the Congress, so that they really understood the situation. Anyone who really understands that situation and the importance of solving that problem, from the point of view of the Nation and the Nation's people, as well as the people of the Northwest, knows that if that case was adequately presented this Congress would not turn it down.

Mr. DONDERO. Why do you in this bill rule out the Federal Power Commission and its authority to make rates for hydroelectric power?

Dr. RAVER. I think Congressman Jackson answered that this morning. It is his bill and I think he left it in your hands for discretion as to how that matter shall be handled. We have no feeling about that.

Mr. DONDERO. It raises the question as to why the Department of the Interior should take over the jurisdiction of rate making, a subject always left in the hands of the Federal Power Commission.

Dr. RAVER. It is a matter of trying to have some uniformity, as Congressman Jackson indicated this morning. We have the rates on a part of our project being fixed by the Federal Power Commission and the rates on another part being fixed by the Secretary of the Interior.

Mr. DONDERO. Can you give the committee some information on this subject?

Dr. RAVER. That is in accordance with the law as it now stands.

Mr. DONDERO. Have you any evidence to present to this committee that the aluminum companies established in the Northwest are selling their product to the Federal Government or otherwise at a rate cheaper than the aluminum company down in the district of my good friend to my right here, Mr. Larcade of Louisiana?

Dr. RAVER. I don't know whether there is any difference in the price of aluminum produced in the Northwest from any place else so far as the Government purchases are concerned or not. However, I do have this feeling, Congressman. Were it not for the fact that 40 percent of the amount of aluminum that is produced in this country is being produced in the Northwest, the price for aluminum would be materially higher today than it is.

Mr. DONDERO. But what I am driving at, Doctor, is whether or not this subsidized power, although the statement was made to the contrary, is granting some relief to the people of America in getting a product cheaper than they might otherwise have to pay for it.

Dr. RAVER. I do not think there is any question but that it is doing just that.

Mr. DONDERO. That may be an unfair question to you. If we do not get the answer to that here, we will ask some witness who might have it. I am satisfied that our fine chairman here, Congressman Larcade, is intensely interested in that and if his company cannot sell it to the American people as cheap as you can out in the Northwest, he had better know why that is.

Now, you have no schedule or any information to submit to the committee, then, on the question of applications for steam plants and their denial thus far on the part of the Congress in granting them.

Dr. RAVER. No. I am sure that information can be provided for you and if you would like to have me do it I will put it in the record, but I do not have it myself.

Mr. DONDERO. Is the rate for power at the various dams in your area, the Northwest, equal? Is it all the same or are there different rates?

Dr. RAVER. We have a uniform rate.

Mr. DONDERO. For everybody?

Dr. RAVER. For everyone on our system.

Mr. DONDERO. Does that apply to privately owned companies?

Dr. RAVER. Yes, sir.

Mr. DONDERO. They pay no more than anybody else?

Dr. RAVER. No, sir. As a matter of fact, the average rate paid by the private utility companies in the Northwest for power is below the average rate paid by the public agencies and is a little higher than the average rate, I believe, paid by the industries. That is all a function of the way they use the power. The rate is the same but the load factor at which they use it makes a difference in the average price which they have to pay.

Mr. DONDERO. Suppose the city of Tacoma bought power from you, and I assume that it does. They get the same rate as a private utility operating in that city.

Dr. RAVER. That is right.

Mr. DONDERO. Is that not a discriminatory rate because the city of Tacoma, of course, pays no taxes but the private company must pay taxes. If the rates are equal, how can they compete with each other under those circumstances?

Dr. RAVER. That is a matter of State law over which I have no control. I think you will find, however, if you analyze the facts, that the city of Tacoma is paying a very sizable tax contribution both to the State and to its own municipality out of the revenues it receives from the sale of power to its customers.

Mr. DONDERO. In other words, they charge more than sufficient simply to maintain the system.

Dr. RAVER. That is right. I know they pay a sizable amount of taxes. I do not know how they compare with a private utility company.

Mr. DONDERO. Is there any private utility company operating in the same city where you operate?

Dr. RAVER. We do not operate in any city.

Mr. DONDERO. No; you sell power. That is what I meant to say.

Dr. RAVER. We are a wholesale agency that sells power to municipalities, cooperatives, private utility companies, all over that region.

Mr. DONDERO. Has your agency in the Northwest taken over one power company?

Dr. RAVER. We have not taken over any private power company.

Mr. DONDERO. Has one company sold out to you?

Dr. RAVER. No, sir; not to us. There have been parts of properties sold to public agencies in the State of Washington in accordance with State laws set up in that State.

Mr. DONDERO. You mean such as a city or public utility district.

Dr. RAVER. That is correct.

Mr. DONDERO. Is there any negotiation on foot at the present time for the selling out of another company in the State of Washington?

Dr. RAVER. There are negotiations, I understand, for the sale of the Washington Water Power Co. to a group of public utility districts in the State of Washington and for certain parts of the Puget Sound Power & Light Co. Those negotiations have been going on for at least 10 years, to my knowledge, and nothing has transpired yet in the case of one of those companies. There have been some sales of parts of the Puget Sound Power & Light Co. to public agencies. Notably, only last year the city of Seattle acquired that portion of the Puget Sound Power & Light Co. which was serving competitively in the city of Seattle.

Mr. DONDERO. Has your agency in any way made provision for an amount to be paid in taxes either to local communities or States or the Federal Government?

Dr. RAVER. No, sir; the Federal Government makes no such provision. We do, however, pay all our revenues into the Federal Treasury except for amounts kept in our so-called emergency fund, from which there have been relatively few expenditures, all of relatively small amounts.

Mr. DONDERO. That is all.

Mr. LARCADE. Thank you, Mr. Dondero. Are there any questions by the gentleman from Alabama?

Mr. JONES. Yes, sir.

Mr. LARCADE. You may proceed.

Mr. JONES. Dr. Raver, under the basic legislation creating the Bonneville Power Administration, is there anything to prohibit the building of steam plants without the express authorization of Congress?

Dr. RAVER. That is a legal question, Congressman Jones. All I can say about it is this. Our attorneys are not admitting that we do not have the authority to do this, but we feel that this is the type of thing that must come before Congress for determination through a piece of legislation such as we have submitted.

Mr. JONES. It seems to me that you do have that authority.

Dr. RAVER. That would certainly be one way to approach the matter, Congressman. As I pointed out before you came in, the urgency of this matter was apparent a year ago, and we recommended that somebody build steam plants then. As a matter of fact, we contacted the private utility companies, and we talked to the Governor of the State of Washington as to whether or not the State could do it and some of the bigger public agencies, and in all of those discussions it seemed that it devolved upon us to try to assume this responsibility. Now we have simply reached the point where the risk of delay in the event of an adverse opinion as to our authority is one aspect of the problem.

Mr. JONES. How many municipalities, private utility companies, and electric co-ops now depend 100 percent upon you for the generation of all of their electricity?

Dr. RAVER. I will have to ask Dr. Dittmer to answer that question because they depend on us in varying degrees. Just how many of them depend on us 100 percent—if I may, I would like to ask Dr. Dittmer either to reply directly if he has the information, or to put it in the record for you.

(The following tabulation was submitted by Bonneville Power Administration for inclusion in the record at this point in order to show degree of dependence of Pacific Northwest distributors upon power supplied by Bonneville:)

	100 percent	90 to 100 percent	Less than 90 percent
Cities	10	1	[1] 6
Public utility districts	[2] 16	[2] 5	[4] 3
Cooperatives	33	[5] 1	
Total	59	7	9

[1] These 6, with the percentage of their total requirements supplied by BPA (in terms of kilowatt-hours during calendar year 1950) are as follows: Ellensburg, 54.0 percent; Milton, 49.7 percent; Tacoma, 32.9 percent; Eugene, 23.0 percent; Seattle, 14.4 percent; and Centralia, 8.5 percent.

[2] 3 public utility districts (Central Lincoln, Ferry, and Douglas) have segregated systems supplied entirely from other sources than BPA.

[3] 3 public utility districts (Clark, Grays Harbor, and Pend Oreille) have some segregated systems 100 percent dependent on BPA.

[4] 1 public utility district (Okanogan) has segregated systems 100 percent dependent on BPA. In calendar year 1950 this public utility district bought 73.8 percent of its total kilowatt-hour requirements from BPA. The other two are Cowlitz (serving city of Longview), 79.5 percent, and Clatskanie, 75.3 percent.

[5] 1 cooperative (Wasco) has segregated systems 100 percent dependent on BPA.

The foregoing include all BPA customers entitled to preference under Bonneville Project Act. In addition, the private power companies in the area received a substantial part of their requirements from Bonneville. The calendar year 1950 percentages, showing kilowatt-hours received from BPA under contract in relation to total system use, are as follows: Portland General Electric Co., 50.3 percent; Pacific Power & Light, 41.6 percent; Mountain States Power, 39.5 percent; Washington Water Power, 20.6 percent; and Puget Sound Power & Light, 18.6 percent. The amount so delivered totals 2,803,000,000, or 32.7 percent of the group's requirements as a whole. In addition 551,000,000 kilowatt-hours, or 6.4 percent, was scheduled to Washington Water Power for the benefit of the group, or 6.4 percent of their aggregate requirements. (No breakdown by companies is immediately available on this latter figure.) Thus, combined percentage for the entire group is 39.1 percent.

Mr. JONES. If there is a large number depending 100 percent on your furnishing the electricity for them to distribute, would you not naturally conclude that the Federal Government intended for you to furnish whatever capacity is necessary to supply their needs?

Dr. RAVEN. I think a very good case can be made for that point of view. I have stated before appropriation committee hearings many times that I felt, because of the unique stituation in the Northwest on the supply side and because of the very thing that you have mentioned, the Federal Government has, by the facts of the situation, assumed a public-utility responsibility whether it is recognized in the Bonneville Act or not.

Mr. JONES. Can you conceive of a more impractical situation than a distribution system owning part of its generating facilities and being supplied in whole or in part by another generating unit? Here they are taking a municipality that has a distribution system and is depending upon you to furnish them with electricity for the munici-

pality. Then they reach the moment where you can furnish them no more electricity. You, in turn, say to this municipality, "Now we have furnished you all we are going to; you build your own plant."

Is that not what you would be saying if these plants are not furnished?

Dr. RAVER. I think that is right, Congressman.

Mr. JONES. What is the total generating capacity of the Bonneville Power Administration?

Mr. DONDERO. Mr. Chairman, may I interrupt? There is a call of the House. I am just wondering whether we are going to heed that call. I am perfectly willing to answer it and come back.

Mr. LARCADE. I think, in view of the call of the House, the committee should suspend and members answer to their names and return immediately to the hearing.

Mr. JONES. Mr. Chairman, since there might be several more, would it not be better to return in the morning?

Mr. LARCADE. The chairman requested we try to complete the hearings this evening if possible.

(Discussion off the record.)

Mr. LARCADE. It seems to be the wish of the committee that we answer the roll call and resume immediately after we have answered.

(Whereupon a short recess was taken.)

Mr. JONES. I want to get certain facts that will be useful in the consideration of the legislation. The last question I propounded to you, as I recall, was, What is the total generating capacity of the existing facilities?

Dr. RAVER. The total generating capacity at Bonneville and Grand Coulee Dams at the present time for peaking purposes, which is a capacity figure, is 2,667,000 kilowatts.

Mr. JONES. What is the operating capacity over the last 12 months?

Dr. RAVER. May I give it to you this way. For a median year—and by that we mean an average water year—that capacity is worth 1,827,000 average kilowatts.

Mr. JONES. What is your normal consumption in the same period of time?

Dr. RAVER. Before answering that, may I give you another figure that goes with the previous one. For a critical water year—that is, a year in which the run of the rivers and the water supply in the rivers is the lowest of record since records have been taken—that peaking capacity would be worth, in average kilowatts, 1,467,000 kilowatts. The amount of secondary energy that we have been talking about firming up, the difference between a critical water year and a median or average water year, means that we have 360,000 kilowatts of secondary power at the present time.

Mr. JONES. In other words, you roughly estimate about 400,000 kilowatts of secondary power.

Dr. RAVER. On the average. And that will increase as new dams come in.

Mr. JONES. Give us the daily periods of the peak loads.

Dr. RAVER. That varies with the time of year and with conditions, but normally your industrial business is highest, with the rest of the business, about 11 o'clock in the morning. Then in the evening, after that goes off, your peaks come on for your lighting and residential

and entertainment and things of that kind from around 4:30 to 7:30 in the evening. Those peaks vary in different communities.

Mr. JONES. All right. Now, what is the price of the primary power now being generated at the present installations?

Dr. RAVER. We have several rate structures under which we sell this power.

Mr. JONES. Do you mean classifications of users?

Dr. RAVER. We have that also. But we have several rate structures that are basically open to any customer. He can take his choice of the best rate, depending upon the kind of use he makes of the power.

Mr. JONES. What I am trying to get at is the difference in the price of the firm power and the price of the secondary power.

Dr. RAVER. It is not so much a difference in price; it is a difference in guaranty of delivery and guaranty of taking on the part of the customer. In other words, it is of value to us to have a customer who guarantees to take this power for 20 years and we are able to guarantee delivery for that period of time 24 hours of the day, if he wants it, every day of the year. The price for that kind of power, which is firm power and would correspond to this 1,467,000 kilowatt figure which I gave you, is $17.50 per kilowatt-year which, at 100 percent load factor use, would be about 2 mills per kilowatt-hour. If his use is only 80 percent of the time, it would be 2.5 mills per kilowatt-hour. If he only used it 50 percent of the time, it would cost him 4 mills per kilowatt-hour.

In other words, he would be paying an annual rate to us for 20 years, if that is the kind of contract he has, for every kilowatt of capacity that we make available to him for his use, of $17.50 per year for each such kilowatt.

Mr. JONES. Have you any users to whom you make secondary power available at a lower rate than those obtaining a firm contract?

Dr. RAVER. Yes, we have.

Mr. JONES. That is the point I want to get at—the difference. You are trying to justify the increase of firming up 400,000 kilowatts of unfirmed power which will justify the investment in the projects.

Dr. RAVER. Yes. That secondary power is sold for several purposes. One purpose is for the displacement of steam. For example, if one of our customers has a steam plant and they are buying a certain amount of firm power from us under this $17.50 rate and they want to use this steam capacity to carry peak loads or carry loads at certain times when it would be more economical for them to carry those loads on steam than to pay us $17.50 per kilowatt-year for that capacity and only use it a relatively short period of time, they can do that. But if we happen to have surplus power at the time they would use that steam, we will sell it to them at 2.5 mills for the period of time that they want it.

Mr. JONES. If that available power were firm power, what would it bring you?

Dr. RAVER. It would bring us, in terms of the rate, only 2 mills. But over the year we would get a whale of a lot more money out of our firm power than we would by selling this on intermittent basis.

Mr. JONES. So the purpose of this legislation is to put you in a position to do the very things we are talking about.

Dr. RAVER. That is right; to get more revenue out of this and not let so much of it go to waste.

Mr. JONES. Now, Dr. Raver, you have confined the request to 400,000 kilowatts. Why are you restricting yourself to such a margin when in the future you are expecting an expansion of the hydro facilities? Why do you not ask for authorization to firm up any amount that becomes available in the future?

Dr. RAVER. Only for the reason of presenting something specific and objective in terms of an existing situation to this Congress in connection with the legislation. If it weren't for that, you are absolutely right. It should be just an open authorization.

Mr. JONES. As a matter of fact, you are making a request for just the minimum amount that would firm up 400,000 at a normal stream flow in a given year.

Dr. RAVER. That is right.

Mr. JONES. Now, suppose you had an abnormal flow in any given year and your increase should go to $1,950,000, for example. Then you would still have some unfirm power on hand.

Dr. RAVER. That is correct. But that comes down to the basic economics of the determination of this 400,000 now. In other words, at what point in connection with the hydro development of this kind do you continue or do you stop adding steam, because you can add steam to this interruptible at a very uneconomic rate which would require you to burn the steam maybe 75 percent of the time in order to capture 25 percent of the water that was going to waste. And that cost would be too high. It just comes down to a cost question on that. We are always going to waste some water out of this situation on an economic basis.

Mr. JONES. The increased cost of producing electricity generated by steam will be spread upon 1,827,000 kilowatts; is that not true?

Dr. RAVER. That is true on the basis of our present installed capacity.

Mr. JONES. You will have that increase spread over the cost of the total hydro output.

Dr. RAVER. That is correct.

Mr. JONES. Is that going to appreciably increase the cost of electricity in the area?

Dr. RAVER. No, sir.

Mr. JONES. What would be the effect if you were not able to take the increased cost of steam generation and sell it direct? Would it increase the cost of electricity in the area? In other words, your billing is based upon the cost of steam generation alone.

Dr. RAVER. It would increase it about three or four times if we handled it that way.

Mr. JONES. As a matter of fact, would it not be true that your cost of fuel alone would be about the same as what your hydro costs at the present time?

Dr. RAVER. As a matter of fact, it would be almost twice the cost of hydro today—just the fuel alone.

Mr. JONES. And by putting this increased cost over the total output, it would not materially increase the present rate schedule on which you are earning a profit at the present time.

Dr. RAVER. That is right.

Mr. JONES. How much does the Federal Government have invested in the hydro items that you are now operating?

Dr. RAVER. $458,000,000 in generation and transmission.

Mr. JONES. By the addition of these steam plants and the utilization of about 400,000 kilowatts of power that will be firmed up, would it not materially benefit the investments that the Federal Government already has in those facilities out there?

Dr. RAVER. We think it would, Congressman. We have a financial analysis showing what those benefits would be which we are supplying for the record here if you would like to have it.

Mr. JONES. So far as the issue is concerned, this is not an issue of private versus public power, but it is a question of whether or not we are going to make sound investments in a present going enterprise and make it more profitable and more useful to the area, rather than getting into a discussion as to whether or not this is a fight between private and public power.

Dr. RAVER. I think that is true and I think it is true in the Northwest.

Mr. JONES. In addition to that, it means the responsibility that the Government has given you to furnish power in that area that will continue uninterrupted, without impairment to the growing economy of that area.

Dr. RAVER. That is the key thing. It is the amount of power and the need for it rather than the cost issue or the public versus private issue that is really involved here now.

Mr. JONES. Doctor, is it not true also that since electricity is in short supply in every area in this country, it will contribute materially to our national defense program to have energy available in the Bonneville area?

Dr. RAVER. Very definitely, Congressman. As I indicated earlier, that motivated us, on this program a year ago to get something started, to do this. Somebody ought to do this as quickly as possible.

Mr. JONES. We went into a discussion of the aluminum industry. I would like the record to show that at the present time we are subsidizing the Mohawk Electric Co. between the difference of five mills and nine mills to produce aluminum at Massena and we are paying $4,300,000 to that company for the increased cost of the difference between the nine and the five mills.

So actually, when we get down to talking about subsidies, we are subsidizing the power companies throughout this country. And I do not think that is the issue. The question is producing the electricity that is required in this country.

I am sorry to see that you have to come to the authorizing committee; that you could not go directly to the Appropriations Committee and obtain the funds.

I would like to say this. I think it is our responsibility to take immediate action to relieve the situation, not only in the Northwest, but in every other section of this country where the economy is demanding action on the part of the Government of the United States.

That is all I have to say. I did not mean to testify for you, Doctor.

Dr. RAVER. May I make one comment for the committee in connection with that. We are not offering this as a substitute for any private utility plan or any public agency plan that is being proposed. We are trying to support them, and this is not a substitute for any of those projects. The need for this power is so great that all of those programs that I indicated previously are either under construc-

tion or were recommended a year ago should be going ahead and this steam proposition in addition.

Mr. DONDERO. Mr. Chairman, my able friend from Alabama made the statement that we are subsidizing the power companies all over the United States. I do not think he meant that that should go as far as the question indicated, because we are not subsidizing the power companies in my area of Michigan.

Mr. JONES. If I said all over the country, I certainly was in error. I do not want to convey that idea. The requirement of subsidizing the Mohawk at Massena is an item of national defense and requires an investment that we place in the power companies, and I find no fault with it whatsoever because aluminum is the requirement and to have aluminum you have to have electricity.

I thank you, Mr. Dondero, for correcting that because I do not want to leave the impression that I want to engage in any fight between private and public power, even though the gentleman from Michigan knows my thinking on that.

Mr. DONDERO. Dr. Raver, the amount of energy we could produce; 400,000 kilowatts in the eight steam plants, would that same amount of power be generated if a license had been granted to the city of Tacoma, Wash., to develop the dam at the Cowlitz River and also for the city of Portland on the Deschutes River?

Dr. RAVER. Yes; it could, and it would be better power.

Mr. DONDERO. Why was it not done?

Dr. RAVER. We are not proposing any other project. As a matter of fact, I have supported both the Cowlitz and the Pelton projects. As the Secretary of the Interior said this morning, if those two States and their own local agencies, their legislatures and their State conservation commissions, will support them, he would. But as long as the people in the State are opposing it because of the fish situation, as I understood his statement, he felt that he did not want to impose the will of the Federal Government on what the local people wanted.

Mr. DONDERO. That same question has arisen, however, in regard to the fish interests and the effect of the Grand Coulee Dam on the salmon on the Columbia River. The same thing has happened there already.

Dr. RAVER. In the case of Grand Coulee, only about 2 percent of the total run ever got as far as Grand Coulee Dam, according to the statistics I have seen put into the records at one place or another by the fish people. They have substituted at Grand Coulee Dam, in order to make up for that loss, a hatchery and a new technique of planting those salmon in streams below Grand Coulee Dam where presumably they are coming back to spawn instead of looking for the spawning grounds above Grand Coulee.

Mr. DONDERO. That satisfied the fish industry.

Dr. RAVER. So far as I know.

Mr. DONDERO. It seems to me we could develop the required power without going into the building of these steam plants. But you leave the impression with me that not the Federal Government but the States out there have not taken the necessary action or are opposed to it.

Dr. RAVER. I think the Federal Government has a problem before it because the issue is still before the Federal Power Commission as to whether or not those licenses will be granted. So I am not absolv-

ing the Federal Government here of any responsibility or blame for the fact that those two projects have not as yet been started.

Mr. DONDERO. How long ago have they been filed or were they filed?

Dr. RAVER. I know the Cowlitz matter has been up for a long time—a year or more at least on this present application. I think the project of the Portland General Electric Co. has been before the Federal Power Commission for almost the same length of time.

I want to point out that I do not see any conflict between building these steam plants and building both of those projects. They should be built, and so should these steam plants.

Mr. ANGELL. If those two projects are built on the Deschutes and the Cowlitz, it would not take away the necessity for building these stand-by plants to firm up the power.

Mr. DONDERO. It would make one difference, however. It would keep the Federal Government in the field of producing electric energy by water power and not branching out and broadening the power in order to get the Government into the steam plant building. I can see, if this bill is adopted, you could be building steam plants all over the United States and point to this as a precedent. It simply indicates how far we have gone afield from the original conception of the production of power as a surplus incident to the construction of dams for flood control and navigation and so on.

Dr. RAVER. You have given me the answer to Congressman Jones' question that he asked a little while ago as to why we limited this bill to a certain specific number of steam plants located at certain places: So as not to set a precedent for the United States but to indicate that we are asking for authorization to do a specific job in a specific place.

Mr. DONDERO. And you say, so far as all other means and other sources of private investment and industry, they either cannot do it or will not do it and therefore the only recourse is for the Federal Government to do it. That is about the position that your testimony takes and that of the previous witness upon this bill.

Dr. RAVER. In the Northwest.

Mr. MACK. Will the gentleman from Michigan yield?

Mr. DONDERO. Certainly.

Mr. MACK. It is my understanding that when the city of Tacoma applied for a permit from the State government to build dams on the Cowlitz River, that the State Legislature of Washington by an overwhelming majority refused to grant the permit by the legislative device of making that stream a State fish sanctuary. The Tacoma Power Utility then came to the Federal Power Commission to seek that permit. Their request still is undergoing hearings. Even if the permit is granted, it is quite probable that the State of Washington will bring suit to have such action set aside on the ground that such a permit trespasses on State rights. In any event, even if the Cowlitz permit were to be granted by the Federal Power Commission and the courts were to uphold the Federal Government's right to grant the permit, several years will elapse before anything can be accomplished on the Cowlitz.

Mr. DONDERO. You mean it would take longer to build that plant than the steam plant?

Mr. MACK. Probably, because of the dispute as to whether the State or the Federal Government has jurisdiction. The State legislature

has refused a permit on the grounds that it would interfere with the fish runs in that particular river.

Mr. LARCADE. The gentleman from Arkansas, Mr. Trimble.

Mr. TRIMBLE. I have no questions.

Mr. LARCADE. The gentleman from Oregon.

Mr. ANGELL. Coming back to the question raised by my good friend from Michigan, am I not correct in saying that the building of these stand-by plants is an adjunct and a part of the whole development of the hydroelectric power projects on the Columbia River and is not an independent undertaking to develop electric power by means other than water?

Dr. RAVER. I think that is correct. I think what we are asking Congress to permit us to do here in effect is to make property of the Federal Government—namely, power coming as a byproduct of navigation, flood control, and irrigation—a more valuable piece of property than it otherwise would be. Now, that is about what this comes down to in simple terms. But the lawyers may have some other way of expressing it. This is an adjunct of Government property that is being sold as a byproduct from these other purposes, and we want to make it more valuable to not only the people of that region but to the Government of the United States, financially, by so doing.

Mr. ANGELL. Is it not true also that there is no fight between the private power interests and the Bureau in the placing of these steam plants?

Dr. RAVER. No, sir. I have talked to all of them about it. They have indicated to me that they were not going to oppose this legislation. They have indicated to me that they felt that this would be helpful in their program. They did not see how they could be expected to make our property more valuable at their expense, so to speak, and to take on this responsibility of making this hydro firm so that it would be more useful to them as well as other customers in the region.

Mr. ANGELL. Would it be feasible for private concerns to develop the stand-by plants independent from the hydro system?

Dr. RAVER. I am quite sure that it is not, for this reason, and it goes back to the unique situation in the Northwest. I don't say that this is true in all parts of the country. In that area or region the basic energy supply must come from this river-development program and primarily from the Columbia River and some of the main tributaries of the Columbia. In the control of the waters of those rivers, it is necessary to control floods as well as to undertake other types of control. And, whether it is necessary or not, the Government has determined it is desirable to build a transportation facility—a navigation facility—in connection with that control. Also, because the Northwest has great areas of rich land which are arid, it is desirable, from the point of view of the Nation as well as the people out there, to control this water so it can also be used for irrigating that land.

No one of those three purposes is a purpose that can be financed privately, and yet all three of those purposes come along with or are part of this power facility that results from the development of the river system by the Government in that region.

Since the energy base of that region is basically this hydro power, its whole economic future depends on that energy base coming along with these other purposes. Now, with that kind of a situation, the

Government ties these dams together electrically so that they become one big project for all of these purposes, so that the reservoirs may be operated most economically, and to get the maximum use of the water in the reservoirs for all of these purposes. Tying them together through this giant grid system electrically means that we have a pooling operation because we not only pool the power from the Government dams but we pool the power from the private utility company dams and the public agency dams as well, electrically and hydrologically. Going along with that kind of a physical pooling operation, we average the rate to everybody so far as our own facilities are concerned and pass along the benefits of this uniform rate to all who buy power from us. The rate that they pay for the power that is produced and handled by the Government in this pool is an average cost—an average rate based on an average cost.

Now, to expect a private utility company or a public agency to build a steam plant to make the power in this pool more valuable without compensating them in some way for it, at least, would be an unfair proposition. Furthermore, there is no single utility company or even a combination of them that could or would be willing to locate these steam plants at the points where they would be most valuable for pool operation. We are the only agency that can really do that.

Mr. ANGELL. It would be out of their jurisdictional area.

Dr. RAVER. It would be out of their areas. If they located them, they would want them for their own particular load situation. But one of the great values of these steam plants is to locate them at the fringes of our transmission grid systems.

Mr. ANGELL. As a matter of fact, it is true, is it not, Doctor, that the revenues from the operation of these hydro plants by the Government are not only sufficient to amortize the total cost of upkeep but also to add very substantial sums toward the reclamation of the adjoining lands?

Dr. RAVER. Yes. At least we have that obligation to carry out as a part of our financial responsibility. We take care of that portion of reclamation projects developed by the Government out there which cannot be borne by the landowners. That is paid for by the power users in this average wholesale rate that these steam plants would make. These steam plants would make a contribution to our overall revenue situation. There is a limit, as I indicated to Mr. Jones, I think, earlier, as to how many of them should be built at different times, and that limit is reached here.

I might point out that the number of plants that we have suggested here just reaches that limit. We actually make gains financially, very significant gains, with two steam plants, and as you go on up the scale to the top you finally reach a breaking point where we are about even. But we get the additional supply of power, and it is worth just breaking even on it to do that.

Mr. ANGELL. Mr. Chairman, that is all. I know the committee is anxious to get on with the hearing.

Mr. LARCADE. The gentleman from Minnesota.

Mr. BLATNIK. No questions.

Mr. LARCADE. The gentleman from Ohio.

Mr. MCGREGOR. I will yield at this time to my colleague, Congressman Wood.

Mr. WOOD. Dr. Raver, is it not a fact that you are one of the principal career men in the Federal Power Administration?

Dr. RAVER. Well, I wouldn't say anything about the "principal." I have been in it now for 12 years.

Mr. WOOD. I think you are modest, and I think you are perhaps quite principal. Could you give me any idea as to why there is a sudden alleged power shortage in the Pacific Northwest? There are no more aluminum plants. There are no more plants operating than there were a year ago.

Dr. RAVER. Congressman, our loads in that region are growing—just normally, without any new aluminum plants at all—at the rate of about one new Bonneville Dam per year. We have put out forecasts and reports about what we were running into, for the last 6 or 7 years, in which we have predicted the very situation we are now in. The only reason we are now in it is because other power supplies have not been keeping up with the growth that is going on in that region. It is not aluminum; it is everything.

Mr. WOOD. What growth particularly?

Dr. RAVER. Well, the growth in the use of electricity by each individual consumer who is there, as well as the growth in population, which means new consumers every year. It is just a growing dynamic region that we are in, and we are not keeping up with it powerwise.

Mr. WOOD. Did you have a temporary brown-out last winter?

Dr. RAVER. No, sir. Last winter, with all of these aluminum plants on, including the pot lines that are on the interruptible supply, we carried them through the entire year. Incidentally, we made a tremendous contribution to the aluminum stockpile last year over and above what anyone had a right to expect from the Northwest if we had had a dry water year, because last year we had better than an average water year, and we took care of everything. There weren't any brown-outs or cut-backs last year of any nature.

Mr. WOOD. Has it been less than average this year?

Dr. RAVER. The question as to whether a water year is average or less than average, of course, cannot be answered until the year is over. You don't know what your average is until you are through the year. All we know is that, even with a good water year this year, the loads have grown again during the year, and we were going to be in a tight situation even if we have an average water year. But it so happens that this year we have had a very long, dry summer, with no rains to speak of since last April; and in the normal beginning of our rainy season, around September 15, the rains did not begin then, so that the level of the rivers has been dropping to the point where the only thing a prudent man could do was to get ready for a critical water year. We just don't know yet. But we have had to protect our reservoirs. We have had to hold the level of the reservoirs that we have in that whole region, both privately owned and publicly owned and Government-owned, right up to the level that they are now, so that, if this dry spell continues and the run of the rivers continues going down, we use all of the steam in the area instead of using hydro. That is what is going on now.

At some point we begin to draw down those reservoirs and also run the steam, so that we come out next spring, when the snows melt and the runoff starts, without actually having injured the region any more than was absolutely necessary.

That is our basic operating problem in the operation of those reservoirs.

Mr. WOOD. Recently I returned from Idaho, and on a trip to south Idaho I found the Snake River bank full. I was told that all of the storage dams were full and my own Lake Coeur d'Alene is 1 inch higher than it usually is at this time of the year. So that, as far as the Snake River and its tributaries are concerned, I do not think one could say they had a dry year. I believe it was drier in north Idaho. I did not see the Columbia, and it might be that that was lower than usual.

Do you have any idea what portion of the total drainage the Snake River provides? Would it be a third of the Columbia River?

Dr. DITTMER. Currently it is running just about a third

Dr. RAVER. I think your observation is correct. The rainfall in the Snake Valley was much better than it was in the remainder of our drainage area—Canada, northern Idaho, northwestern Montana, and northeastern Washington. As a result we are getting pretty good water conditions at Bonneville Dam, which gets the benefit of the Snake flow.

But our big problem is the Grand Coulee Reservoir. After all, that is the big storage reservoir for that region, at the present time.

Mr. WOOD. Has the Hungry Horse Dam in Montana been tied into the Bonneville power grid yet?

Dr. RAVER. Not as yet. We are building a 230,000-volt transmission line from our substation outside of Spokane over to Hungry Horse and then want from there to tie in at Anaconda, Mont., with the system of the Montana Power Co. That line is under construction and should be energized, at least one section of it, in time for the first generation coming in from Hungry Horse Dam next fall.

Mr. WOOD. The fall of 1952; is that right?

Dr. RAVER. Yes, sir.

Mr. WOOD. Is there any power production at all at the present time at Hungry Horse?

Dr. RAVER. No, sir.

Mr. WOOD. I think Congressman Jackson stated this morning that the Harvey aluminum plant had been granted a license to locate one section of their proposed plant at Kalispell.

Dr. RAVER. That is correct.

Mr. JACKSON. I would just like for the record to show I do not believe I said they were granted a license. They have an application for a loan and that matter has not been finally approved. It is now pending, as you know.

Mr. WOOD. They will not be able to tap that source of power, at any rate, until next fall.

Mr. JACKSON. I doubt whether they would be able to build an aluminum plant in that time. I would imagine it would be sometime after September of 1952.

Mr. WOOD. Is there a present brown-out in the Pacific Northwest?

Dr. RAVER. No, sir.

Mr. WOOD. Is there to be one on October 1?

Dr. RAVER. The indications are that if there is not a major change in the rainfall situation, there will be a brown-out around the 5th of October. I will ask Dr. Dittmer, who is following that more closely, to give you any other ideas.

Mr. WOOD. Before I left Coeur d'Alene I received notice that we were to have a brown-out the beginning of October, October 1. And you would explain that brown-out by the shortage of power you speak of?

Dr. RAVER. Yes, sir.

Mr. WOOD. Have you any idea how much power would be saved by a brown-out, offhand?

Dr. DITTMER. We estimate between 50,0000 and 100,000 kilowatts by a brown-out if by brown-out you refer to the cutting off of excess street lighting, cutting off of signs, such voluntary cut-backs as residential customers may make and things like that. It is very difficult to estimate.

Mr. WOOD. Yes, it would be, I can see. Doctor, do you happen to know why administration support was withdrawn from the Albeni Falls project, or was it?

Dr. RAVER. I did not know that it was, sir, and I certainly would know no reason why it should be.

Mr. WOOD. Four Congressmen from Idaho appeared before the Senate committee asking that the appropriation be returned, but so far I do not know whether any final action has been taken on it. How about Palisades?

Dr. RAVER. Palisades, I believe, is in conference at the present time.

Mr. WOOD. The support was withdrawn on that. That is not to receive any funds definitely. How about Ice Harbor?

Dr. RAVER. Ice Harbor is in conference now, I believe, between the House and the Senate.

Mr. WOOD. I believe, however, that there is no particular policy to restore the funds to complete Ice Harbor. How long would it take to complete Ice Harbor if funds were available?

Dr. RAVER. It would come into production in the fall of 1955, according to the schedule.

Mr. WOOD. McNary.

Dr. RAVER. McNary is coming into production in the fall of 1953.

Mr. WOOD. Funds were withdrawn from that, though, were they not?

Dr. RAVER. Yes. I cannot understand why funds should have been withdrawn from any of them, as far as I am concerned.

Mr. WOOD. But they were withdrawn. Chief Joseph.

Dr. RAVER. I think in Chief Joseph the funds were about the same as the Army asked for this year, both in the Senate and the House. There might have been some minor adjustments, but it was not significant. I was not aware there was any administration withdrawal of support for any of those.

Mr. WOOD. Perhaps I should put it the opposite way. There was no administration pressure to force these appropriations through.

Dr. RAVER. Well, I did everything I could in testifying before committees to justify them.

Mr. WOOD. I thank you a lot for that, Doctor. Doctor, do you happen to know or is it not a fact that all or most of the aluminum plants in the Pacific Northwest have been built wholly or largely by Government money?

Dr. RAVER. I think they were all or practically all built by Government money during the early part of World War II.

Mr. WOOD. If so, might they not more easily lend themselves to manipulation by Government to further its own purposes than if they had been built by private capital?

Dr. RAVER. Manipulation by Government for what?

Mr. WOOD. To further the Government's own purpose. They naturally would, would they not?

Dr. RAVER. I am sorry, but I really do not understand that.

Mr. WOOD. If these aluminum corporations are largely owned and dominated by Government money, they would naturally lend themselves more readily to follow the request of Government in their policies than if they were privately owned. That would be natural, would it not?

Dr. RAVER. I think that would be a matter of contract between the Government, as the lender of money, and the borrower. I presume those matters would all be covered by contract.

Mr. WOOD. Doctor, is it a fact that the Kaiser plant in Spokane was rather suddenly advised or ordered to shut off its electric power, especially on one of its pot mines, in fact in such a hurry the fluid aluminum had to be allowed to cool in the pot mine representing an enormously difficult job to handle it later as it is now a mass of solid metal? Is that a fact?

Dr. RAVER. I do not think that is a fact. I heard about that. If you would be interested, I would be glad to give you my understanding as to what happened.

When it became apparent to us, at least a month or 6 weeks ago, that we might be running into a lack of adequate water to keep these interruptible pot lines on—in other words, the ones on which we have a right under our contract to cut off if water conditions require it—Dr. Dittmer, the power manager, called all of the customers who have contracts of that nature with us into a meeting in our office and discussed with them how they would be operated and how the whole situation should be handled if we ran into this kind of a situation. When it became more apparent that we were going to run into it and that we were going to have to cut off some of these pot lines, they were called in again, I think only a few days in advance of the time, and notify exactly when they would have to cut it off. As I recall, it was on Monday at midnight. They were informed that if any steam in the area was available, that could be used to keep their lines going, we would make it available to them.

When midnight came Mr. Kaiser's manager at Spokane was given enough steam to keep those lines running another 6 hours so that he had ample time to make any adjustments in his operations that were necessary, and everyone else did because the only pot lines that went off were one from Alcoa and one from Reynolds, and the Alcoa pot line went off without adverse effect, and they had the same notice that Kaiser did.

Also, this idea of freezing up is erroneous. They do not freeze up if they know how to operate them. Alcoa did not freeze up their pot lines and they left all the aluminum in there and they let it cool off too. I don't know whether Mr. Kaiser does not know how to operate his lines or just what it was, but I heard the story and I thought you might be interested in the facts on the situation.

Mr. MACK. May I interrupt. Do I understand you to say that you had given sufficient notice for them to clear their lines but the Kaiser

organization did not clear their lines, and you are inferring at least that if there was a freeze it was their fault and not the distribution or the furnishing of power?

Dr. RAVER. I am not inferring. They did not clear their lines. I do not know what they did. But they had the same notice as Alcoa had and they could have handled it as Alcoa handled it.

Mr. WOOD. I was informed at noon today by a friend of mine from Spokane who just flew in today that as a matter of fact one of them did freeze up at the Kaiser plant.

Dr. RAVER. Excuse me, Congressman. Dr. Dittmer informs me, and I want to be sure it is in the record, that the Kaiser people have informed us very emphatically they have no complaint whatsoever as to the manner in which Bonneville handled that situation and they want that cleared up. I am glad to report that.

Mr. WOOD. Doctor, this is perhaps out of your jurisdiction. Do you have any ideas as to why Charles Wilson wired the three aluminum companies rather suddenly advising them to move their plants out of the Pacific Northwest, knowing there was no other place for them to move?

Dr. RAVER. Well, anything that I would say on that would be purely a guess. I have not talked to Mr. Wilson and I certainly would not like to make any guesses as to why he issued such an order. I assume Mr. Wilson is a very honored and respected and intelligent gentleman and he probably had some good reasons. I do not know what they were.

Mr. WOOD. We can, at any rate, have that go into the record that way—that such an order was sent as far as you know.

Dr. RAVER. Yes, sir. I believe the order was that they submit information to him about moving. I do not believe it was an order actually to move.

Mr. WOOD. I think you are correct on that, sir. Now, Doctor, has there been any organized effort, as far as you know, to propagandize the public utility district power units in the Northwest and the Washington State Grange as to the advisability of buying out private power units, particularly the Washington Water Power with which I am most closely connected in my own home town. I have no stock in it or anything of that sort. Has there been a good deal of propaganda work or do you know of any advising the public utility districts and the Washington State Grange to effect such a purchase if compatible with State law?

Dr. RAVER. Of course, the Washington State Grange has always supported and still supports the public utility district law of that State and the public utility district of that State which have gone into operation in accordance with that State law. Now, I do not know whether the Grange is doing anything as an organization in connection with the proposed acquisition by certain public utility districts in the State of Washington of the properties of the Washington Water Power Co. But the Grange as an organization has supported public power ever since I have known anything about it and has supported these public utility districts that are set up by law to go into business by buying out in their particular districts the private utility companies that are serving those districts. I don't know anything about propaganda activities.

Mr. WOOD. Has the Bonneville Power Administration carried on any efforts in order to further the purchase of private power companies by the public utility districts and the Washington State Grange?

Dr. RAVER. What do you mean by efforts?

Mr. WOOD. Oh, propaganda, public meetings at which your officers would appear, you and your officers, advising them of the advisability of effecting such purchase.

Dr. RAVER. We have had little to do with any of those acquisition movements since 1944 when I gave up an effort which the public utility districts of one of those areas had asked me to undertake, perhaps as an expert, to try to negotiate a deal. Now, I did that as a public service at the time when it seemed that if our program was to go ahead and the voters' wishes—and they had voted time and time again to do some of these things—were to be carried out, then I might render some service by acting as a negotiator for the purchase of the properties of the Puget Sound Power & Light Co.

When it became apparent to me that it would be impossible for me to work out any kind of negotiation, I wrote to all of the Commissioners saying that the matter was turned back completely to them, and that we could have no further responsibilities in it.

Now, I do not know of any propaganda efforts that have been made in that direction by Bonneville since. Occasionally I have personally discussed acquisition privately with duly elected public officials, but this has been solely from the standpoint of the effect on the power supply.

Mr. WOOD. Did you or your administration take any part in the recent meeting at Kennewick?

Dr. RAVER. Yes; I spoke there.

Mr. WOOD. What was the object of that meeting?

Dr. RAVER. I don't know. It was a grass-roots meeting to determine what the attitude of various communities and people would be about the comprehensive program of the Federal Government for the development of these dams on these different rivers. I knew nothing about the meeting until I was asked if I would come there as a speaker. There were some 47 communities represented there; there were chambers of commerce of various communities; there were mayors and public officials present; there were private power people present. The Inland Empire Waterways Association was represented. A number of businesses were represented, particularly from around Lewiston, Idaho, and that whole area of the Snake River where those business people are interested in seeing navigation completed.

Now, I thought from my appraisal of the meeting frankly, that it was a very good cross section of all interests in that region and that everyone had an opportunity to say and indicate just what he felt about this whole program. When I was asked to speak there, I did so.

Mr. WOOD. Did you or your Administration take any part in the meeting this summer at Nampa in south Idaho?

Dr. RAVER. I don't know what meeting you are talking about.

Mr. WOOD. I think it was a State convention of the A. F. of L.

Dr. RAVER. Very likely. I know that I was invited to speak there. I don't believe that I did. I think Mr. Marlett, the Assistant Administrator, spoke.

Mr. WOOD. I think there were two speakers.

Dr. RAVER. There may have been, sir. I do not remember.

Mr. WOOD. Is it a fact, Dr. Raver, that the Bonneville Power Administration is now using 175,000 kilowatts of power to pump water into the Grand Coulee Reservoir at this time?

Dr. RAVER. No, sir.

Mr. WOOD. Have they done any pumping?

Dr. RAVER. Yes, the Bureau of Reclamation had their pumps working there, I think, up until about a week ago.

Mr. WOOD. Why did they stop?

Dr. RAVER. Well, they have a schedule that they are trying to adhere to of getting the water into this controlled reservoir that they have below Grand Coulee Dam, so that a certain amount of that water had to be in this fall and the rest of it will be pumped into that reservoir next spring, when the spring runoff starts, in order to be ready to start irrigation of the first block of new land to be brought in on that great Columbia Basin irrigation system sometime early next summer.

Mr. WOOD. You thought it was advisable, in the face of the coming power shortage, to use that much power for that purpose, in view of the fact that the rainy season will shortly commence when it will give more water for your power and for the pumping as well.

Dr. RAVER. That is a matter that is not within the control of the Bonneville Power Administration. That is within the control of the operators of the Bureau of Reclamation at Grand Coulee Dam.

Mr. WOOD. At any rate this reservoir water will not be needed for irrigation before next summer.

Dr. RAVER. That is right.

Mr. WOOD. That is a fact, is it not?

Dr. RAVER. Yes, sir.

Mr. WOOD. How long do you estimate it will take to complete the steam plants you propose, over-all?

Dr. RAVER. The gas turbine plants it is estimated could be put into operation in the fall of 1953 and the first steam plant in the fall of 1954.

Mr. WOOD. That is 2 years from now.

Dr. RAVER. That is about 2 to 2½ years.

Mr. WOOD. What provisions are you prepared to make at present, with the brown-out on October 1, to take care of the electric needs of the mines in my district in north Idaho, the largest zinc producers in the United States and the second largest producers of lead?

Dr. RAVER. That whole question of how the brown-out is to be handled has been crystallized in the form of an order by the Defense Electric Power Administration, which sets out the steps that will be taken when and if it becomes necessary to take them. That order will be administered by a man from the staff of the Defense Electric Power Administration here in Washington who is now in the Northwest for that purpose. Priorities on any cut-backs that may have to be made on any industry, mining or anything else, are determined by the needs of the defense efforts. A schedule of those priorities has been worked out by the Defense Production Administration and the Defense Electric Power Administration and, I think, by the Defense Minerals Administration. So I cannot answer that, Congressman, except in terms of indicating to you the kind of machinery that has been set up to handle that problem.

Mr. WOOD. Thank you.

Dr. RAVER. I do not believe they are customers of Bonneville in any event. But it doesn't make any difference whose customers they are.

Mr. WOOD. You are quite sure in your own mind, Doctor—and I am not asking this personally but in a general sort of a way—that there is no connection between the alleged power shortage and the known efforts of the administration to force passage of the Hells Canyon Dam in Idaho through the Congress. That is, this is not a sort of a blind set-up in the Northwest to focus people's attention to the fact that there is a shortage and that it would be advantageous to get in touch with their Members of Congress to force through as quickly as possible Hells Canyon Dam.

Dr. RAVER. I am quite sure that is not true. I have heard that statement made and I can understand why there might be some fears that that might be true. But I am quite convinced that that is not the case.

Mr. WOOD. Was active propaganda for the building of Hells Canyon Dam carried on at Nampa in Idaho last summer?

Dr. RAVER. By the American Federation of Labor organization?

Mr. WOOD. No; by your speakers.

Dr. RAVER. I am very frank to say that whenever I am asked to make a speech on Hells Canyon Dam I support it, and I presume anyone in my organization who is called upon to do so, if he felt the way I did about it, would do so likewise. I support it not as a matter of propaganda but as a matter of stating what the facts are with respect to what that dam will do for this region, not only from the point of view of adding to the region's basic power supply, but from the point of view of being a key dam in a major and basic flood-control program that is certainly important to the people who live below it.

Mr. WOOD. Have you any facts relative to any work being presently carried on at the site of Hells Canyon Dam?

Dr. RAVER. No, sir; I have nothing to do with Hells Canyon Dam so far as the construction goes.

Mr. WOOD. You do not know of any extensive boring projects to get down to bedrock?

Dr. RAVER. There have been some borings carried out there, originally, I think, by the Army engineers.

Mr. WOOD. That was done this summer.

Dr. RAVER. There have been some borings made there this summer. I was up to the site of Hells Canyon Dam this summer when certain borings were being made to determine the conditions of the foundation.

Mr. WOOD. Would you be in a position to know that that work done this summer was carried along without any congressional authorization or appropriation?

Dr. RAVER. No; I have no reason to know that, and I would be very doubtful if that were true.

Mr. WOOD. I think, however, it was a fact.

Dr. RAVER. I believe these agencies, both the Army and the Bureau, have a general authorization on investigations. Otherwise they would never get before you with a question of authorizing a dam unless they had some basic information upon which to make such a request.

Mr. WOOD. Has any of this propaganda work or advisory work relative to the advisability of building Hells Canyon Dam in the Inland Empire, let us say, been carried on through public funds?

Dr. RAVER. Well, whenever I travel to a meeting that I have been asked to attend and speak to, I charge my railroad fare and my per diem to the United States Government, and so does any other Bonneville employee who is authorized by me to attend such a meeting.

Mr. WOOD. You would not be in a position to know whether the recent trip of four Department of Interior men in a private plane for that purpose of carrying the advisability of building this dam to the people in the Pacific Northwest was paid for by Government funds, would you?

Dr. RAVER. I would not know anything about that. I might say that I have attended meetings myself in a Bonneville plane, and the expenses of that plane were paid for by the Government. I certainly cannot afford to ride in a plane on my own salary.

Mr. WOOD. If Hells Canyon Dam should be authorized, how long would it take to build it?

Dr. RAVER. The present schedule of the Bureau of Reclamation, I understand, calls for the fall of 1957.

Mr. WOOD. About 6 or 7 years.

Dr. RAVER. That is right.

Mr. WOOD. How long ago did you begin to plan for the steam power plants in the Northwest?

Dr. RAVER. How long have we been planning for them?

Mr. WOOD. Yes.

Dr. RAVER. As I indicated earlier, I think——

Mr. WOOD. I do not think I heard your testimony.

Dr. RAVER. We developed an emergency program about a year ago at Bonneville, at the request of the Defense Electric Power Administration, and it was a program that was developed in cooperation with private power companies and the public agencies of the region to get before the Defense Electric Power Administration the sum of projects and the names of the projects that could be completed most quickly. In that list of projects which we submitted at that time was one of these steam plants. Now, that is the first time we had done any planning of seam plants.

Mr. WOOD. About a year ago?

Dr. RAVER. About a year ago. And we have developed these plans out of those conferences since that time.

Mr. WOOD. Now, in the case of the building of these steam plants, after all, the private power companies would pay their portion of the expense in taxes for the building of the plants, would they not?

Dr. RAVER. Yes, sir.

Mr. WOOD. I think that is all.

Mr. LARCADE. The gentleman from Washington.

Mr. MACK. The hour is getting rather late and I dislike to protract the hearing. At the same time, I think there are points that may be raised against this legislation and that we ought to get into the record the best answers possible to objections that may be raised.

When and if the Jackson bill reaches the floor of Congress, and I hope it does reach the House of Representatives through favorable action by this committee, some of the members will have various questions about these steam plants. One of the objections that may be raised to them is the cost. You were present, I think, Dr. Raver, when Secretary Chapman this morning testified that the eight steam

power plants this bill contemplates would be self-liquidating. He said they will return to the Government the 60 millions invested in them; that they will return the interest on that investment; that they will pay for the depreciation; and that they will pay for all operating cost. Are you of the same mind as Secretary Chapman that these power plants will be self-liquidating?

Dr. RAVER. I have to be of the same mind because the law under which we operate requires that we do that. Therefore, we have to adjust our rates so that it will transpire that way.

Mr. MACK. It is your considered opinion that these plants will pay out in the period of 35 years?

Dr. RAVER. Yes, sir. We should set up our schedules of charges on the basis of a reasonable life of these plants and I think 35 years is about as long as we ought to look ahead on a steam plant, but we need to have these plants pooled in with the rest of our system in order to do this.

Now, if those steam plants were operated, as I pointed out to Congressman Angell earlier, by a private utility for their own load, it would be a very expensive proposition. But worked into this pool and averaged out with this interruptible power, the averaging process and the increase in firm power sales that we can make by doing that gives you the basic financial justification for making this expenditure.

I think everyone recognizes that steam power costs are much higher than our hydro costs, and it is only by locating them properly on our system where we get the benefits of savings, by working them into the transmission systems so that we can put off new transmission lines that would only be used for peaking purposes for quite a period of time, and by averaging in with them the interruptible power that we have, that we come out with an economic justification that will support what Secretary Chapman said.

Mr. MACK. These plants that you will build will be far more modern than any of the existing steam plants in the area. It is my understanding that most of the steam plants in the Pacific Northwest at the present time were built a great many years ago. Since they were built, undoubtedly great progress has been made in lessening the cost of generating power by steam by the use of more modern equipment?

Dr. RAVER. Yes; that is very definitely true. We are seeing in the Northwest today the operation of steam plants which, in order to carry this present emergency situation, will only turn out in the neighborhood of 200 kilowatt-hours per barrel of oil used, whereas a modern plant will turn out from 500 to 550 kilowatt-hours per barrel of oil, and some of them are even higher than that.

There is obviously a tremendous economic loss in operating obsolete steam plants, and those are owned by our customers out there. We are not suggesting that it is our obligation to remove that inefficiency. But from the point of view of the operation of this great pool in which they have an interest, we can bring more efficient steam plants into operation at all times, not just in an emergency situation, but at other times when otherwise they would have to operate very inefficiently. And we can give them an opportunity to retire these inefficient plants and at least hold them only in stand-by condition.

Mr. MCGREGOR. Will the gentleman yield?

Mr. MACK. Yes.

Mr. McGREGOR. Dr. Raver, when these projects were established, it was to take care of the ordinary need, but the war emergency has brought on a greater need for power out there. Is that what has put you into the existing difficulty?

Dr. RAVER. That is what brings it into focus immediately. That is true.

Mr. McGREGOR. Then the development is still available to take care of the intent for which it was constructed—in other words, normal need. But the war emergency has given you greater than normal need, with the result that you are requesting this steam power to aid during this emergency period. Is that correct?

Dr. RAVER. I think that is a fair statement. The steam plants serve a normal need, but the mobilization emergency makes the need for them especially urgent at the present time.

Mr. McGREGOR. Will the gentleman yield for one question more? In you opinion, what effect will the new developments have on the emergency need of power to complete the projects suggested by the gentleman from Idaho? He named four or five that were partially completed. If they were completed, would they take care of the emergency need in that area?

Dr. RAVER. Well, they come in a little later and they are going to help. Some of those are coming in next year. We certainly have in all of our estimates and forecasts depended upon that and taken that into consideration.

We are predicating this steam-plant development on the assumption that all of these projects that have been talked about are coming in. So far as the emergency is concerned, these plants do bridge a gap which is coming up here in the next 3 or 4 years, even if these other programs go forward as scheduled. But, in addition to bridging the gap, they fit into the whole program as economically feasible and usable.

Mr. McGREGOR. You take the position that this emergency—and I expect your guess would be about the same as ours—is going to be longer than a period of 3 or 4 years.

Dr. RAVER. Well, I do not know in this kind of situation how reasonable men can do anything else except get ready for it.

Mr. McGREGOR. What I am trying to get at is to determine in my own mind what would be the most feasible and economical thing to do—to insist upon the further development of the projects that are already started or to build the steam plants, because they will take from 2 to 3 years to construct, as I understand it.

Dr. RAVER. Of course, the only answer that I can give you to that is that we must do both of those things.

Mr. McGREGOR. You mean your ordinary pull on the electricity has so increased since the construction of these power units that are now fully operating to satisfy this additional improvement?

Dr. RAVER. That is right. I have been asking for much more than this Congress has ever given to that region, and I still am.

Mr. McGREGOR. In other words, some of the argument we of the Midwest have been giving, to put some of the plants in the Midwest, now turns out to be really a truthful statement. We in the Midwest are starving for some of these plants, and we have some plants that are only operating one-third of the time and half of the time. We just cannot understand why those in control are sending all of the

orders to the Northwest when we have to spend more money in order for them to get power while we in the Midwest, where we have the power, have no orders, no plants, and have unemployment.

Of course, I recognize that you probably will have no answer to that, but those are facts, and I hope someone will explain to me why.

Mr. MACK. I have noticed in the newspapers, Dr. Raver, that we have some great railroad systems in this country that are very heavily in debt and which are not making very much money. Still, the management of these railroads go to their directors and ask for more funds with which to modernize these railroads through the purchase of Diesel engines or the installation of other improvement of facilities in order to give better service and in order to reduce the costs.

Is it not true that you are appearing here today merely to ask the Congress, as directors of the Government's business, the largest corporate business in the world, to do exactly what the managers of these railroads are asking their directors to do and what those directors are doing? It is just a matter of prudent business to make our power facilities more efficient and less costly in operation.

Dr. RAVER. That is true, and it brings out one of the distinguishing characteristics of this particular business. That is that, when you are in a period of expansion in the public-utility business, you are putting out at least five times as many dollars as you are taking in. That is just a normal ratio which is completely different from the ordinary commercial business, where they will take in as many dollars as they put out for investment each year. You are putting out for investment in this business practically always about five times as many dollars as you take in. But it is going into an expanding investment. What you are getting back is a return on that investment.

Mr. MACK. Dr. Raver, I do not want to get you into a controversy with Charles Wilson or his office, but I would like to make some general inquiries concerning the advantages or disadvantages of the removal of aluminum plants from the Pacific Northwest.

Those aluminum plants, such as Reynolds and Alcoa, represent a tremendous investment in money; do they not?

Dr. RAVER. About $65,000,000.

Mr. MACK. The two plants together?

Dr. RAVER. All of the aluminum plants now there.

Mr. MACK. That is four.

Dr. DITTMER. We have five plants.

Mr. MACK. The approximate cost of an aluminum plant is somewhere between $16,000,000 and $20,000,000.

Dr. RAVER. Well, today they cost about $8,000,000 per potline, which would be a lot more.

Mr. MACK. Now, if those plants were removed, the cost of removing them would involve a great deal of new construction and transportation costs. This probably would run into the millions of dollars. Is that not so?

Dr. RAVER. Yes, sir.

Mr. MACK. Now, if you built a steam plant and served an aluminum company solely and exclusively from that steam plant, the amount of money that you would have to charge the aluminum company to get back your investment would be considerably higher than the present charge for hydroelectric power. Is that true?

Dr. RAVER. Yes. The hydropower represents about 2 cents a pound in the Northwest on the cost of aluminum; and, if it were being run by steam, it would represent about 7 or 8 cents a pound.

Mr. MCGREGOR. That is not considering your first investment.

Dr. RAVER. No; I am talking about the cost of power in the aluminum. It is now about 2 cents a pound in the Northwest; and, in contrast to our hydro, it would be three times that much, or 6 to 7 cents a pound if a steam plant were used as an isolated unit to provide the needed power.

Mr. MACK. Now, if they move the plants from the Pacific Northwest and establish them in some other area, it would be necessary for that area to provide steam power or hydropower to supply those plants.

Dr. RAVER. Certainly it would.

Mr. MACK. No area of the country has quite so much hydopower which is low-cost power as the Pacific Northwest. If you move these plants from the Pacific Northwest to some other area, the cost of making aluminum would be substantially increased, with the result that the Government would have to pay more money for planes or other defense equipment built with aluminum produced in a high-cost-power area.

Dr. RAVER. As was pointed out by one of the other Congressmen, at Massena, N. Y., the Government is paying a subsidy of 5 mills per kilowatt-hour. In other words, the power there is costing the aluminum company 9 mills a kilowatt-hour and the aluminum companies are actually absorbing only 4 mills per kilowatt-hour, so that the other 5 mills is a subsidy of the Government.

Mr. MACK. When the present emergency passes and these aluminum plants go into the production of civilian goods rather than defense needs, under ordinary economic practice the plants where the cost of operating is highest will go out of business first while the plants where the cost is low will continue in operation.

It is my understanding that power is one of the largest items of cost in the production of aluminum, if not the largest.

Dr. RAVER. As long as you have a competitive system, the highest-cost producer will be the first one to go out. I think that is an accepted economic principle.

Mr. MACK. Would you agree with me that the solution of the aluminum production problem in the Pacific Northwest is to build more power facilities in the Pacific Northwest rather than to remove the aluminum plants to some other region?

Dr. RAVER. I think that is sound, and I think it applies to the new aluminum plants that are being talked about that have not been built out there yet.

I would like also to point out, Mr. Congressman, that the idea of refusing to go ahead with the Harvey plant at Kalispell, Mont., on the basis that we have a power shortage out there now, is a fallacious idea, not only because the Harvey plant is not in existence yet and, therefore, cannot possibly have anything to do with the power shortage that we are now experiencing——

Mr. ANGELL. Will the gentleman yield? Is it true that from 40 to 50 percent of the potential hydroelectric power of the United States is in the Columbia River and its tributaries?

Dr. RAYER. That is correct. May I finish my statement on the Kalispell situation?

Mr. ANGELL. Yes.

Dr. RAYER. I also want to point out that the power that would be provided this Harvey aluminum plant is power from Hungry Horse Dam, and the shortage situation is not over in Montana—it is over on the Pacific coast—so that the shortage situation that some of our newspaper people have been talking about in connection with putting this aluminum plant there is on the Pacific coast. Where we plan to put that plant, there will be a surplus of hydroelectric power unless we put the plant there.

We will not be able to get that surplus out of Montana into the shortage area without the expenditure of millions of dollars for new transmission lines that have never been planned to do any such thing as that.

Now, some of the facts about this thing ought to come out, Mr. Congressman. It is damaging, naturally, to have misstatements of that kind be broadcast all over this country with no reference to the facts of the situation at all.

I am not arguing whether Harvey ought to go in there or not, but he certainly should not be kicked out of there on the basis of the power shortage. There is no power shortage which would preclude location of the Harvey plant at Kalispell; in fact, due to demands on our system elsewhere, that general area was the only place where it was possible for us to make a firm commitment of that size for so soon a delivery.

Mr. MACK. The Bonneville Power Administration has available to it 3.5 million kilowatts of electricity—installed kilowatts of electricity.

Dr. RAYER. The figure I gave was for peaking purposes—2,774,000.

Mr. MACK. It is my understanding that when all the potential hydroelectric facilities of the Pacific Northwest are completed we will have in the States of Oregon, Washington, Idaho, and Montana a total of about 38,000,000 kilowatts of electricity, which is more than 10 times the present production of power in that area.

Dr. RAYER. That is about right—somewhere between 30,000,000 and 40,000,000 kilowatts potential in that program of development. And it is interesting to point out that that is about half of the installed generating capacity in the United States today of all of the privately owned and publicly owned and Government systems in this country—not only hydro but steam and everything else.

Mr. MACK. I read recently that the total present consumption of power in the United States is about 67,000,000 kilowatts of installed capacity. If it is true that we have 38,000,000 kilowatts of potential hydroelectric power in the Pacific Northwest, then we have more than one-half of the present consumption of electric power in the United States. In other words, if we can develop all hydroelectric potential power in the Pacific Northwest, we will have between 55 and 60 percent as much power in that small region as now is used in the whole United States. This certainly makes the Pacific Northwest the ideal place for any industries which are heavy users of power and which require cheap power.

Dr. RAYER. That is a very good point.

Mr. MACK. There is one other point I would like to discuss. Congressmen are sticklers for precedent. Is there any precedent for the Congress of the United States appropriating funds for the building of a steam plant?

Dr. RAVER. The TVA is the example—the Johnsonville steam plant of the TVA. So far as I can recall at the moment, that is the only one.

Mr. MACK. That plant, as I recall, has about 300,000 kilowatts of installed capacity or about the same capacity as you propose to install here with these steam plants.

Dr. RAVER. I think that is true.

Mr. MACK. Is it a comparable project to this one?

Dr. RAVER. Well, I think they are in many ways. They do operate their own hydro facilities, and of course Bonneville does not operate the Government hydro facilities. They are operated by either the Bureau of Reclamation or the Army engineers, whichever happens to build them. But basically that is not the point. It is still a Government operation and the TVA is a Government operation.

Mr. DAVIS. Will the gentleman yield? Speaking of precedent, we know that every year they have been loading REA funds for the construction of steam-generating plants. There is one already built and in operation in my district. Four loans have been made this year of REA funds.

Dr. RAVER. That is correct. I had forgotten.

Mr. MACK. As to these small turbine plants, how long will it require to get them in operation?

Dr. RAVER. Eighteen to twenty-four months.

Mr. MACK. Congressman Jackson's statement that they would be completed in late 1953 is correct.

Dr. RAVER. I think so.

Mr. MACK. And the erection and construction of the larger steam plants will take about a year longer.

Dr. RAVER. They probably will.

Mr. MACK. Just one other question. Has any decision been made as to where these steam plants will be located?

Dr. RAVER. Yes, but the location of them could be changed depending upon changed conditions. Some new big load might locate out there as a defense matter in a different location, and from an engineering and economic point of view it might seem desirable to shift the location of the plant.

In the basis of our transmission grid system as it is set up, as far as we can determine now, we think these locations that we have indicated—and I would be glad to show them to you on this map—are the locations.

It is a steam plant at Coos Bay, one at Longview, and one at Bremerton Navy Yard.

Mr. MACK. There is a large aluminum plant at Longview where it is contemplated there will be a steam plant located?

Dr. RAVER. That is right.

Mr. MACK. Have you given any study to the use of wood fuel in these steam plants?

Dr. RAVER. Yes, sir, there are possibilities of using waste wood, particularly in the Oregon area, where there has been a great expansion in the cutting of timber and work in timber mills in the last couple of years.

We are having a meeting with a group of timber people from that area next Thursday in Eugene to discuss this very thing, because the timber people themselves, who are developing these mills, are inquiring whether or not they could participate in this steam plant matter by getting some small steam turbines, or even using wood and developing the gasses for a small gas turbine. Of course it can be used for both those.

Also, consideration has been given to putting small plants down there, tying them into our grid system and using this waste wood for that purpose.

Mr. MACK. Longview produces a great deal of waste wood, does it not?

Dr. RAVER. There is a great deal of waste wood there, and that is where you will find a considerable amount of steam generation.

I think they are using up about all they have in that area. As a matter of fact, some of it is shipped from Longview down to Portland for our steam plant operation there.

I am quite sure that hogged fuel is being used now in existing steam plants to a great extent, and we want to be careful that we do not run into the idea that we can use hogged fuel for all these new steam plants. There is not enough hogged fuel out there for it.

Mr. MACK. The Bureau of Mines has been making an extensive study of the coal deposits in the Rochester, Toledo, and Centralia-Chehalis area. Have you looked into that to see whether the kind of coal found there would be satisfactory for use in steam plants?

Dr. RAVER. I have not looked into them personally, Congressman, but when we decided somebody had to build more steam plants and it looked like we were going to have to do it, we hired a consulting engineer to give us a report on the potentialities of the use of coal. That report indicates to us that the coal reserves there are not the most adequate in the country, but they are certainly worth developing and it comes down to a question again of cost. If you run into an oil situation, we are going to be in a position to use coal. There may be a higher cost, but we are convinced now that we can get it. It may have a very beneficial effect on the revitalizing of some of these coal-mining operations, particularly in the State of Washington, that have been going down because of the competition, primarily with oil.

We are operating this as a business and we haven't any program here to use coal just to be using coal. If we can get oil and it is cheaper than using coal, then, as far as I am concerned, we will use oil. But we are certainly getting ready to use coal if it is necessary or more economical.

Mr. MACK. Dr. Raver, I thank you for your testimony. It has been most helpful. Mr. Chairman, I have completed my examination.

Mr. JACKSON of Washington. I was wondering just before you close if Dr. Raver might point out on the map, the locations.

Mr. ANGELL. Are you going to be here in the morning, Doctor?

Dr. RAVER. Yes.

Mr. LARCADE. What is the pleasure of the committee? The chairman had hoped we would be able to conclude the hearing on this bill, at this time, but the majority of the members seem to think it would be preferable to adjourn until tomorrow morning at 10 o'clock.

Mr. Buchanan of the Federal Power Commission has been present all day and has requested 5 minutes.

What is the pleasure of the committee?
Dr. RAVER. Thank you very much, Mr. Chairman.
Mr. LARCADE. Thank you, Dr. Raver.
We will be glad to hear from you, Mr. Buchanan.

STATEMENT OF VICE CHAIRMAN THOMAS C. BUCHANAN, FEDERAL POWER COMMISSION

Mr. BUCHANAN. My name is Thomas C. Buchanan and I am appearing before you today as Vice Chairman of the Federal Power Commission to express that Commission's views on the bill, H. R. 4963, introduced by Representative Jackson of Washington. Chairman Wallgren has asked me to appear here inasmuch as he was unable to be present.

The purpose of the bill H. R. 4963 is to authorize the construction, operation, and maintenance of certain fuel-fired electric generating plants in order to make it possible for the Department of the Interior to meet certain defense power requirements in the Pacific Northwest, and for other purposes. I will make a general statement on the principal features of the bill and thereafter will be glad to answer any questions which members of your committee should desire to ask. Mr. E. T. Hughes, Chief, Section of Power Supply of the Commission's Bureau of Power, and Mr. Willard W. Gatchell, assistant general counsel, are here with me and will assist in answering any technical questions which may arise.

The bill raises several questions regarding the Pacific Northwest: (1) The need for fuel plants to supplement hydroelectric generation, (2) basin accounting for power revenues and expenses, and (3) the method of fixing rates for the sale of Government-produced power.

In only a relatively small number of instances can the hydroelectric power potential of a site be fully utilized without fuel-electric power support; consequently the development of water power sites must usually be planned with a view to use of the hydroelectric plant in conjunction with other power sources, both hydro and fuel. The cheapest and most reliable power supply can usually be obtained from a combination of fuel-electric and hydroelectric plants rather than from the exclusive use of either.

With respect to the need for fuel stations to support the hydroelectric plants in the Pacific Northwest, the Federal Power Commission went on record as early as 1941 (report of Chairman Leland Olds to President Roosevelt, July 16, 1941) in recommending the construction of fuel-electric plants in that region. Such plants are as badly needed now as they were at that time because the Pacific Northwest is still a region that has power shortages and relatively little fuel power.

The latest reports of utility systems in the Pacific Northwest indicate a shortage of over 400,000 kilowatts of dependable capacity in 1954, with adverse stream flow conditions. At the present rate of hydroelectric plant construction planned for that region, the shortages cannot be made up until 1957 and even at that time there will still be an energy shortage if stream flow conditions should be adverse. Under these circumstances there is no question as to the need for generating capacity and energy in the amounts the proposed fuel-electric plants could supply.

In addition to the large amount of firm power available from Federal hydro plants in the Columbia Basin there is also available during spring and summer months considerable nonfirm energy. Fuel-elecrtic plants could be utilized to support this hydroelectric generation in one or the other of two ways—the nonfirm power from the Government-owned hydroelectric plants might be sold to electric utilities that could provide the necessary fuel plants to make the entire output firm, or the Government might build the necessary fuel plants so as to utilize the intermittent power along with a small amount of fuel power, and sell the entire amount as firm power. The latter course is the one recommended in H. R. 4963.

According to articles which have appeared in technical publications, it is the plan of Federal agencies interested in power developments in the Pacific Northwest to construct three 100,000 kilowatt steam-electric stations, one at each of the following locations: Coos Bay, Oreg.; Longview, Wash.; and Bremerton, Wash. The bill makes provision for these installations but does not specify the locations mentioned in the articles above referred to. These plants would all be located where fuel deliveries can be made by water and they would be large enough to permit low construction costs combined with high efficiency. The result would, therefore, be relatively low energy costs and a reduction in over-all power costs in the region.

Section 14 (a) (2) proposes the construction of five fuel-fired electric generating plants each having a rated capacity of not in excess of 20,000 kilowatts. The Bonneville Power Administration studies indicate that these plants would use 5,000 kilowatt gas turbines. Although the unit capital cost of such plants may not be greater than that of the 100,000 kilowatt steam plants, production costs will be higher and reliability of the units will be lower. Since a basic need of the Bonneville system is fuel support for hydroelectric plants, it is believed that this can most economically be supplied by the 100,000 kilowatt steam units. The trend in modern construction is to the use at central locations of the largest fuel-fired units that can advantageously be used on the load, rather than to the construction of small fuel plants located at the extremities of the system.

The addition of a certain amount of fuel-electric generating capacity in the Pacific Northwest may not represent a clear gain of this amount in increased capacity for carrying load in the entire country on account of limitations in our ability to produce and erect such capacity. Thus additional plants in the Bonneville area may result in delay in the erection of a corresponding amount of capacity elsewhere.

It is estimated that actual power-plant construction in the United States will fall 2,000,000 to 4,000,000 kilowatts short of scheduled installations in 1952 due to material shortages. Predictions are made that this will occur unless considerable increases can be made in the allocations of critical material during the fourth quarter of 1951 and in succeeding quarters.

If the lag should continue, the erections of steam-electric plant capacity might still be behind schedule in 1954 and this would necessitate decision as to whether preference should be given to defense industries in the Pacific Northwest or elsewhere.

With respect to the second question, the proposal contained in section 14 (d) providing for the setting-up of a basin account to re-

ceive revenues derived from the sale of power at all Federal projects and to meet the costs incurred in connection with such generation, the Commission has previously expressed the view that some arrangement for pooling revenues from the various power sources in the Columbia Basin is not only desirable but necessary. The purchaser of electric energy may, at different times, utilize hydroelectric energy or fuel-generated energy or a mixture of the two. It is difficult and generally unsatisfactory to set up schedules of rates that discriminate in the charges for energy according to the source, and, so far as possible, such rate structure should be avoided. Since the energy from these plants would be commingled with other energy generated by Federal hydroelectric plants in the area, there is presented a serious question of Federal power policy.

At the present time the Commission is required to approve rates for the sale of energy generated at Bonneville, which was constructed under flood-control acts, but has no authority with respect to energy generated at Grand Coulee, constructed under the Reclamation Act.

As to the third question, in authorizing some other Federal power projects, the Congress has found it desirable to have the rates proposed by the agency responsible for marketing power from a project subject to review by an independent body which applies to the sale of power from Federal projects the same expert judgment as it is required to apply to rate control over public utilities, having in mind, of course, the peculiar problems of public power operations. For some years Congress has required the Federal Power Commission to make cost allocations and review rate schedules in connection with power projects of certain Federal agencies under sections 5 (a), 6, and 7 of the Bonneville Act (50 stat. 731), sections 5 and 6 of the Fort Peck Act (52 stat. 403), and section 5 of the Flood Control Act of 1944 (58 stat. 887).

Rate review and cost allocation authority similar to the authority in the statutes referred to should be considered in connection with the proposed bill. If Congress should decide to provide in the bill H. R. 4963 for rate review by the Federal Power Commission, however, it is recommended that such review be made effective by including therein all power sold within the Pacific Northwest from Federal projects and subjecting such power rates to the examination, approval, and revision of the Commission and, in the event rates or changes in rates are not proposed, giving the Commission full comprehensive authority to prescribe rates. The alternative is to repeal those portions of the above-mentioned acts which confer partial rate-making authority on the Federal Power Commission.

The question of what agencies, public or private, should provide the fuel-electric plants so urgently needed in the Pacific Northwest is, of course, a question of policy for Congress to decide. If Federal construction is decided upon, it is recommended that legislation along the lines of H. R. 4963 be enacted.

We have filed with the committee a report from the Federal Power Commission on their project. I think it speaks for itself.

My prepared statement follows that line. I am willing to submit myself now for any questioning that the committee may have.

Mr. McGregor. I would like to inquire, Mr. Chairman.

Mr. Larcade. The gentleman from Ohio, Mr. McGregor.

Mr. McGregor. Is it possible for private capital to construct these plants, or to construct sufficient plants to furnish the power necessary?

Mr. Buchanan. We do not know those conditions exactly, Mr. McGregor, but our recommendation is that that is a policy for Congress to decide; that there is a question as to whether private power should construct these facilities or whether it should be done by the Federal Government.

Mr. McGregor. Would you tell us whether or not in your opinion there is sufficient private capital and if private capital is willing to produce what power is necessary for that area.

Mr. Buchanan. I do not know that but I was very much impressed by what Dr. Raver said as to the location of these plants and how probably impossible it would be for private capital to do the job the job the same way.

Mr. McGregor. I am wondering if you are in accord with my views.

It was my understanding that Dr. Raver said it was practically impossible for private capital to go in now and produce the power that is necessary.

Mr. Buchanan. That is my recollection.

Mr. McGregor. That is because of the location of these particular plants. They are at the outer edge. Is that your interpretation of his statement?

Mr. Buchanan. That is what I understood Dr. Raver to say.

Mr. McGregor. That is all.

Mr. Larcade. Are there any further questions from members of the committee?

Thank you very much, Mr. Buchanan. We will be glad to have you file any additional statement that you desire in connection with the bill under consideration.

Mr. McGregor. Mr. Chairman, I take it for granted Mr. Buchanan will be available after we analyze his statement and we can call upon him for questioning.

Mr. Buchanan. Yes.

I might mention one thing further, Mr. Chairman. The question of the constitutionality of this has been raised. I might refer the committee to a court decision in point—it is not exactly a power project or a steam-generating plant that was passed upon but the legal principle behind it will support the construction of these plants by the Federal Government, in my opinion. The reference is to the case of *United States* v. *Gerlach Livestock Company* (339 U. S., p. 725), at 738, where it was said:

> Thus the power of Congress to promote the general welfare through large-scale projects for reclamation, irrigation, or other internal improvement is now as clear and ample as its power to accomplish the same results indirectly through resort to strained interpretation of power over navigation.

There is no mention in the Constitution of irrigation or these other matters. The Supreme Court's decision along those lines, in my opinion, would support the steam-generating plants that are proposed here.

Mr. Larcade. Thank you very much, Mr. Buchanan.

The committee stands adjourned until 10 o'clock in the morning.

(Whereupon, at 5:55 p. m., the committee was adjourned.)

STEAM ELECTRIC GENERATING PLANTS IN PACIFIC NORTHWEST

FRIDAY, SEPTEMBER 28, 1951

HOUSE OF REPRESENTATIVES,
COMMITTEE ON PUBLIC WORKS,
Washington, D. C.

The committee met, pursuant to notice, at 10 a. m., Hon. Henry D. Larcade, Jr., presiding.

Mr. LARCADE. The meeting will come to order for the further consideration of H. R. 4963 by the gentleman from Washington, Mr. Jackson.

The first witness scheduled this morning is Mr. Alex Radin, representing J. Frank Ward, president, American Public Power Association.

Is Mr. Radin present?

STATEMENT OF ALEX RADIN, GENERAL MANAGER, AMERICAN PUBLIC POWER ASSOCIATION

Mr. RADIN. My name is Alex Radin. I am general manager of the American Public Power Association. Mr. Ward, president of the American Public Power Association, who is superintendent of the light division, city of Tacoma, Wash., is unable to be here today, but he has asked me to read to the committee this statement which he has personally prepared.

Mr. LARCADE. You may proceed.

Mr. RADIN. The American Public Power Association has a decided interest in the manner in which Congress is dealing with the present critical power supply situation of the Pacific Northwest, even though concern regarding the situation is primarily a regional one.

With regard to the bill under consideration, H. R. 4963, most concern centers around the provision in lines 8 to 11, inclusive, page 4, which would place control of rates for sale of power produced from steam plants to be built under this authorization under the sole control of the Department of the Interior without review by the Federal Power Commission.

This provision is not in keeping with the long-established policy of checks and balances in Government operation. Without such checks and balances the way is open for the setting of rates to serve some purposes not clearly related to the welfare of the ultimate consumer of the region being served. Without such review, recourse which the people of the Northwest now have would be lost.

As a matter of regional concern the present bill proposing the establishment of fuel-fired electric generating plants does not indicate the

constructive action which the public agencies of the Northwest have a right to expect from Congress in dealing with the need for power supply installations.

The unanimous recommendation of the privately owned and publicly owned utilities systems of the Northwest represented by the Pacific Northwest Utilities Conference Committee, made both to Congress and to the Secretary of the Interior, has been that second to prosecuting work on existing Federal hydroelectric undertakings most rapidly, the next step would be adequate support by Congress and all Federal agencies for non-Federal construction of hydro plants, some of which are proposed by publicly owned utilities, the principal one being the 460,000-kilowatt Cowlitz power development of the city of Tacoma.

Following that, consideration should be given to construction of steam turbine electric generating plants. The reason for such position being taken is that the non-Federal hydro plants are all possible of completion more rapidly than fuel-fired electric generating plants could be built. This is due largely to the character of power development in the Northwest as differentiated from power development elsewhere in the country.

Orders for steam turbine driven generators for other parts of the country have been placed in great quantity so that production schedules for this type of equipment are heavily loaded, and it is our understanding that whereas the normal delivery of such equipment is 2 years or less, under present circumstances deliveries could not be hoped for so that installation could be completed in less than 3 to 4 years. A similar situation does not apply in the field of hydro generating plant equipment.

The second reason for placing non-Federal hydro development ahead of steam is that there is only one coal field in the State of Washington which has an output sufficient to run one 100,000-kilowatt steam plant. To supply fuel for three such plants would require their dependence on Wyoming and Utah fields or being dependent on the development of the Washington fields not now in production.

The question of usability of Washington coals is not fully determined. Coal mining in the State of Washington has been on a steady decline over the last 20 years, even to the extent that a cement plant long supplied with coal by a northwest Washington mine may require Utah fuel as its future source. The use of oil presents problems of transportation, storage, and the critical defense nature of petroleum supplies.

Further problems of regional concern in connection with the proposed development have to do with the determination of feasibility; the greater use of power from Federal hydroelectric projects by existing utilities if made available to them on the same basis as would be necessary to provide economic justification for Federal construction of steam plants; the expenditure of Federal funds under stringent defense conditions when expenditure of private money could accomplish the same objective more speedily and more advantageously for the area.

The language of the bill, section 14 (b), which devotes power to be produced to objectives of the Defense Production Act of 1950, would serve primarily to bring more demands for power into the area. This would provide no aid in continuing operation of existing industries

also serving defense needs and employing close to 200,000 men in industries not served directly by the Department of Interior. Such devotion of power to defense as a justification for construction of additional steam generating plants at a time when Congress is still considering appropriations for existing hydro plants and when further Federal hydro plants should be undertaken appears to be a justification on the basis of expediency and not real merit.

Should Congress be pressed for action to expedite construction of additional generating plants in the Northwest as a means of relief under present power need, their attention might well be devoted to facilitating construction of adequate power supply by non-Federal agencies before undertaking expenditure of Federal moneys for problematical development which might be delayed so as not to materially benefit defense requirements for power.

Mr. LARCADE. Thank you. I would like you to submit to interrogation by the committee.

Mr. RADIN. I would like to make it clear at the outset, if I may, that this statement was prepared personally by Mr. Ward, and he was unable to be here; and, although we have discussed this at some extent, the committee will appreciate that being 3,000 miles distant I am not fully conversant with all details of Mr. Ward's statement.

Mr. LARCADE. Do you not care to submit to interrogation?

Mr. RADIN. Well, I will try to answer whatever questions I may, and Mr. Ward has asked me to inform the committee that he will be glad to submit for the record the answers to any questions which the committee may have about his testimony.

Mr. LARCADE. What is the pleasure of the committee? Does any member desire to interrogate the witness?

The gentleman from Alabama.

Mr. JONES. I would like to ask one or two questions. Mr. Ward, I see, is president of the American Public Power Association, also superintendent of the Light Division of the City of Tacoma. Now is he presenting this statement as president of the American Public Power Association and giving their views, or is he speaking for the city of Tacoma?

Mr. RADIN. My understanding is he is presenting this statement as president of the American Public Power Association.

Mr. JONES. And this statement represents the views of the American Public Power Association and not the city of Tacoma?

(The following letter was submitted for the record for insertion at this point:)

AMERICAN PUBLIC POWER ASSOCIATION,
Washington, D. C. September 29, 1951.

Hon. CHARLES A. BUCKLEY,
Chairman, House Public Works Committee,
House Office Building, Washington, D. C.

DEAR CONGRESSMAN BUCKLEY: On September 28, during the hearings by your committee on H. R. 4963, I presented a statement which was prepared by Mr. J. Frank Ward, president of the American Public Power Association. The question arose during the hearings as to whether this statement had the endorsement of the board of directors of the American Public Power Association. I have been advised by Mr. Ward that his statement has been approved by our executive committee. Accordingly I would appreciate it if this letter could be inserted in the record of the hearings at an appropriate place so that this point could be clarified. Thank you for your consideration.

Sincerely,

ALEX RADIN.

Mr. RADIN. Well, those views may coincide.

Mr. JONES. Well, they would be his personal views with respect to the city of Tacoma?

Mr. RADIN. I am sure he personally concurs in this statement; yes.

Mr. JONES. In making this statement, did Mr. Ward as a representative of the American Public Power Association poll other private distribution companies in that area to obtain their views with respect to these proposed projects?

Mr. RADIN. Did you say did he poll private systems?

Mr. JONES. Yes; in the area. Did he make inquiries as to their views with respect to this?

Mr. RADIN. You are speaking of the private electric systems?

Mr. JONES. Yes, sir.

Mr. RADIN. I do not know to what extent he consulted them. I notice he does make reference to the recommendation of the Pacific Northwest Conference Committee, which is an organization consisting both of publicly and privately owned operating systems in the Northwest.

Mr. JONES. Do you know whether or not Mr. Ward obtained their views with respect to this legislation in presenting this statement?

Mr. RADIN. The privately owned utilities?

Mr. JONES. Private and public. Whatever association to which he might belong in that area.

Mr. RADIN. I presume so. He has attended meetings of the Northwest Public Power Association, and he is intimately acquainted with all power systems in that area.

Mr. JONES. It is my understanding that all the distribution people out there, both private and public, had concurred in the request being made by Bonneville to secure the steam-generating facilities as proposed in this bill.

Mr. RADIN. I do not think there is such a discrepancy between that position and the position taken by Mr. Ward. The Northwest Public Power Association has endorsed the Cowlitz project, and I understand that they are sending a telegram in to the committee asking that their endorsement not be construed as meaning that the steam plants should displace the Cowlitz.

Mr. JONES. Mr. Chairman, it was my understanding that there had been communication to the chairman of the committee in which the association out there—I have forgotten the name of it—has requested approval of this legislation.

Mr. JACKSON. Mr. Chairman, there is a letter addressed to the chairman under date of September 24, of which I have a copy, signed by Mr. Gus Norwood, executive secretary of the Northwest Public Power Association, which I think would be appropriate to read into the record at this point. Mr. Norwood is speaking for all of the affiliated bodies, I believe, of the American Public Power Association in that area with the possible exception of Tacoma. But they had a meeting and endorsed this legislation.

Mr. MCGREGOR. Are the Northwest group, the signers of the letter you have, a member of the so-called American Public Power Association?

Mr. JACKSON. Yes. That is right.

Mr. RADIN. They are affiliated with our organization.

Mr. JACKSON. I would like to clarify the record, and I think Mr. Radin will concur in what I say, not necessarily agreeing with what I am saying but with the facts.

Mr. Ward, whose statment he just read, is the superintendent of the light division of the city of Tacoma. He also is president of the American Public Power Association. The American Public Power Association is made up of REA co-ops, cooperative public power bodies, and publicly owned utility districts in various sections of the United States.

Mr. DONDERO. No private companies?

Mr. JACKSON. No private companies in the association. The point is that all of the publicly owned bodies, cooperative, municipal, not all PUD's but most of the municipals and co-ops in the Northwest, belong to the Northwest Public Power Association. They have endorsed the bill. It so happens that the president of the national organization is superintendent of Tacoma City Light; and, as was brought out yesterday, they are primarily interested in the Cowlitz project and feel that that project ought to be given priority before any consideration is given to steam plants.

Is that substantially right, Mr. Radin?

Mr. JONES. I yield to the gentleman from Michigan.

Mr. DONDERO. Do I understand that your position is this: That non-Federal sources of supply for the production of power should be utilized first before we begin the construction of steam plants?

Mr. RADIN. That is correct.

Mr. DONDERO. Is that about the situation?

Mr. RADIN. Yes, sir. As he pointed out in his statement, the Pacific Northwest Utilities Conference Committee, which is an organization of the operating utilities in the Northwest, has recommended that the order of development be, first, the Federal hydroelectric systems; second, the non-Federal hydroelectric systems; and then the steam plants.

Mr. DONDERO. Is the Tacoma plant private?

Mr. RADIN. Publicly owned. Municipally owned electric system.

Mr. DONDERO. Owned by the city?

Mr. RADIN. Yes, sir.

Mr. LARCADE. Will the gentleman from Alabama yield to the chairman?

Mr. JONES. Yes.

Mr. LARCADE. In all fairness, I think it is proper to state at this point that there is a letter in the files addressed to Chairman Buckley under date of September 24 by Mr. Norwood, executive secretary of the Northwest Public Power Association, endorsing H. R. 4963. That letter was acknowledged by Mr. Buckley on September 26, and Mr. Buckley stated, "I shall be glad to see that your letter is presented to the committee during the hearings on this measure which will be commenced tomorrow morning."

Mr. ANGELL. Mr. Chairman, I ask that that letter be included in the record.

Mr. LARCADE. Without objection.

Mr. JONES. May I ask that it be placed at the appropriate place in the record so there can be some degree of continuity.

Mr. MACK. Will the gentleman from Alabama yield to me in an attempt to clarify the record as to the Cowlitz project?

Mr. JONES. Yes, sir.

Mr. MACK. Are you familiar with the controversy that exists between the fish people and the power people over the Cowlitz project?

Mr. RADIN. In general.

Mr. MACK. It is my understanding, and if these facts are not correct perhaps Congressman Jackson can correct me, that the Tacoma Power & Light made application for building power dams on the Cowlitz, which is a large stream that empties into Columbia a short distance below Longview. The Cowlitz is the best spawning ground for salmon and smelt tributary to the lower Columbia River. The fishing interests, the fishermen, and the people of Longview and the vicinity feel quite strongly that if dams are built the fish runs will be interfered with on the Cowlitz.

Tacoma Power & Light, a publicly owned utility, appealed to the State for permission to build dams on the Cowlitz.

The Washington State Fisheries Department and the State administration are opposed to the building at this time of the dams on the Cowlitz; and, if the Federal Power Commission should grant permission to Tacoma to build them, their decision undoubtedly will be the subject of litigation in the Federal courts and probably be carried to the Supreme Court. This would involve, would it not, a long period of delay before determination is made as to whether the State or the Federal Government has jurisdiction over the Cowlitz River as far as the building of power dams is concerned?

Mr. RADIN. It is my understanding, Mr. Mack, that the Federal Government clearly has jurisdiction in this case. It is my understanding that in the Federal Power Commission examiner's report on this case he indicated there was not a matter of dispute as to whether the State or the Federal Government has jurisdiction.

Mr. MACK. The Attorney General of the State of Washington claims the State has jurisdiction, does he not?

Mr. RADIN. Yes. But I think the Federal Power Commission claims that it clearly has jurisdiction in this, which is based on the First Iowa case.

Mr. MACK. The Federal Power Commission claims one thing, and the State of Washington claims another, which means the dispute will result in long court litigation, does it not?

Mr. RADIN. I would not be prepared to answer just what litigation might be involved in that.

Mr. MACK. If these facts which I have presented are correct, then it would seem to me that the building of a dam on the Cowlitz will involve legal issues that will require a considerable period of time to resolve .

Mr. RADIN. I would not be prepared to comment on the legal difficulties. It is a fact that the Cowlitz can be brought in within 2 years. It has an installed capacity of 460,000 kilowatts, and I am informed that they can very reasonably bring that in within 2 years.

Mr. MACK. It can be brought in within 2 years after the time that the legal difficulties are ironed out and the permit to build the dam is secured. It may be a year, 2 years, or 3 years before Tacoma can get permission to build dams on the Cowlitz.

Mr. RADIN. The Federal Power Commission has an oral argument scheduled on this case October 31. Their decision may be forthcoming shortly thereafter.

Mr. MACK. After the Power Commission reaches its decision the courts still must determine whether the State of Washington or the Federal Government has jurisdiction over the stream.

Mr. RADIN. I would not be prepared to say to what extent there might be litigation following a Federal Power Commission decision on this.

Mr. ANGELL. Will the gentleman yield?

Mr. LARCADE. The gentleman from Alabama has the floor.

Mr. JONES. I yield.

Mr. ANGELL. Is the Cowlitz a navigable stream?

Mr. RADIN. It is a navigable stream.

Mr. MACK. I think it is rated as such, but only for very small boats.

Mr. RADIN. I think the Federal Power Commission is clear that it definitely has jurisdiction over this stream.

Mr. MACK. The feeling in the State of Washington may be indicated by this fact, and I think this is correct, Mr. Radin, that in the vote in the Senate there was only one vote in favor of granting the city of Tacoma the permit to build the dam on the Cowlitz.

Mr. LARCADE. Will the gentleman from Alabama yield to the gentleman from Mississippi?

Mr. JONES. Yes, sir.

Mr. SMITH. I would like to ask the witness whether or not the American Public Power Association would endorse an action that would be so completely contrary apparently to the wishes of the State involved, and would you ask Congress to take a step like that?

Mr. RADIN. I am not prepared to say that the State is so contrary to this project. The Northwest Public Power Association, for example, has endorsed the Cowlitz project.

Mr. SMITH. Well, the evidence as reported by Mr. Mack, that the legislature voted with just one exception against the project, indicates some sentiment in the State very overwhelmingly against it, does it not?

Mr. RADIN. Yes; although there are other sentiments in favor of it that are equally strong.

Mr. JONES. They are just not present, are they?

Mr. DONDERO. Will the gentleman from Alabama yield?

Mr. JONES. Yes.

Mr. DONDERO. I want to ask the witness this question: If the Cowlitz River is a branch of the Columbia—is that right?

Mr. RADIN. Yes, sir. It flows into the Columbia.

Mr. DONDERO. What makes anybody on this committee think that the Federal Government would not have jurisdiction over it and not the State of Washington or any other State? The Columbia is a navigable stream, at least part of its distance.

Mr. RADIN. Yes, sir. I think there is no doubt on the legal question that the Federal Government has jurisdiction.

Mr. SMITH. There is no question that the Federal Government has jurisdiction, but we hope that the Federal Government still has some interest in the wishes and policies and interests of the States.

Mr. JONES. We find ourselves in this sort of a situation: We had the governors of the Pacific Northwest come in and testify before this committee when we were hearing the Columbia Valley Authority proposal, and they opposed it on the ground that it would be a trespass

upon the State sovereignty when they were expressing their views. Here we come back and have the same voice saying, "Well, override the State and go ahead with this dam construction." Is that not about the situation?

Mr. RADIN. I think, if I can, sir, state Mr. Ward's position in this way: I think he feels that it is inconsistent on the part of the Department of Interior on the one hand to press for Federal construction of steam plants and at the same time oppose a project which would supply an equal amount of power sooner. I think that, in brief, is Mr. Ward's opinion.

Mr. MACK. The Interior Department is not opposed to construction of the Cowlitz.

Mr. RADIN. Yes, sir, they are. Mr. Chapman has placed himself on record as opposing the Cowlitz project.

Mr. JACKSON. The Secretary stated yesterday, I believe, that he had advised the Power Commission that he was opposed to it unless and until the legislature of the State of Washington indicated that the people through their legislative body would favor the project by withdrawing the law against it. He did not feel that the Federal Government should intervene.

Mr. LARCADE. One at a time, please, gentlemen. Mr. Jones has the floor.

Mr. JONES. I yield.

Mr. DONDERO. The amount of kilowatts would be over 460,000 that would be produced by the Cowlitz?

Mr. RADIN. Yes, sir.

Mr. DONDERO. What is the estimated cost of that installation?

Mr. RADIN. $142,000,000.

Mr. DONDERO. It would be much more than the steam plants then?

Mr. RADIN. It would be financed by revenue bonds by the city of Tacoma.

Mr. DONDERO. Without any Federal cost?

Mr. RADIN. Yes, sir.

Mr. ANGELL. Is that all firm power?

Mr. RADIN. I am not sure to what extent that is firm power. I would be glad to get that information and supply it for the record, if you will permit me.

Mr. JONES. I have just a few questions and then I will conclude. How long has the city of Tacoma had a municipal distribution system?

Mr. RADIN. For many years. I think it is 40 or more years. It is one of the oldest in the country, and I might add that their rates have consistently ranked as the lowest in the country. They have what is generally recognized as one of the best municipally owned electric systems in the country at Tacoma. Their rates are consistently low. I understand also that they can build this project, finance it themselves and maintain their low rates. It is an excellent power project.

Mr. JONES. We always have that situation. When it is profitable for the Federal Government to do it, nobody wants the Federal Government to undertake it, but if it's an unprofitable venture, then let the Federal Government do it.

Mr. RADIN. The Federal Government has never proposed to build the Cowlitz, to my knowledge.

Mr. JONES. I understand. Of course, there are proposals now when it is said, "Let somebody else get the profit out of it and the taxpayers take the rub."

Now, have you had hydro generation all the time?

Mr. RADIN. At Tacoma?

Mr. JONES. Yes, sir.

Mr. RADIN. They have a certain amount of steam generation themselves.

Mr. JONES. When did they add that steam generation?

Mr. RADIN. I am not prepared to say just what time. They have had it for a number of years.

Mr. JONES. What reason was employed in persuading the city of Tacoma to make investments in the steam plant?

Mr. RADIN. I presume it was to firm up their hydro power.

Mr. JONES. In other words, they were making an investment in their system to firm up hydro power so that it would be a more profitable operation for the city of Tacoma? Is that not correct?

Mr. RADIN. I would like to check the facts on that. I am not definite as to the exact reason. It may be that they produced firm power by steam. I would have to check the record on that.

Mr. JONES. They made investments to take care of that marginal loss from steam generation firming up, did they not?

Mr. RADIN. I am sorry, Mr. Jones, but I am not able to answer just what motivated them on economic or engineering grounds to go into steam generation.

Mr. JONES. Is it not rather inconsistent that the city of Tacoma would take such a view since they have themselves gone in and made investments in steam plants to get more profitable production of hydro, and now they oppose a similar project by Bonneville or any other Federal project that is trying to carry out a more economic operation?

Mr. RADIN. I think their view is that the hydro should come first and then steam; that their own hydro should take precedence over the steam; and that the steam should not be looked upon as a displacement or as a substitute for their own hydro development, which would come in sooner than the steam generation.

Mr. JONES. The real question with you people in Tacoma is trying to get the Federal Government through legislation or delay in legislation to resolve the differences between the people in the area. Is that not the question?

Mr. RADIN. I am not sure I understand your question, sir.

Mr. JONES. You are inviting us to delay the construction of steam plants—Mr. Ward—until a certain dam is built in that area which is opposed by the people. Is that not all you are asking for?

Mr. RADIN. I would not state it that way, sir. No, sir.

Mr. JONES. How would you say it then?

Mr. RADIN. I would say that Mr. Ward's position, as I understand it, is that the Interior Department by supporting the Cowlitz project could effectuate power sooner than it could by building steam plants.

That is all, Mr. Chairman.

Mr. LACARDE. The gentleman from Michigan.

Mr. DONDERO. No questions.

Mr. LACARDE. The gentleman from Arkansas, Mr. Trimble.

Mr. TRIMBLE. Mr. Chairman, I am sorry I was late. When I came in here, the gentleman from Alabama was asking something about dam construction, and I am confused as to how the word is spelled. It would indicate that one group spells it one way and the other

group the other. I will probably get that straightened out when other witnesses testify.

That is all.

Mr. RADIN. Sir, if I may, I have just been handed a wire directed I believe to me by Owen Hurd, manager of the Benton County public utility district No. 1, and I would like to read this, if I may, sir. It is very relevant to the position of the Northwest Public Power Association's stand on this. If I may, I would like to have the opportunity to read this.

Mr. LARCADE. Is that a copy of a letter?

Mr. RADIN. This is a copy of a wire directed to me. It was received at my office in Washington. I would very much like to have the opportunity to read this if I may.

Mr. LARCADE. You may.

Mr. RADIN. It clarifies the situation as regards the Northwest Public Power Association's stand on this matter. It reads as follows:

> Action by the Northwest Public Power Association in favoring the construction of Federal steam plants should not be interpreted as a substitute for Federal hydro projects which Northwest Public Power Association has gone on record as favoring or a substitute for the Cowlitz or any other Northwest hydro plant now under construction or being planned by any private or public agency.

That is signed by Owen Hurd, manager of the Benton County Public Utility District No. 1, and he is president of the Northwest Public Power Association. I think that might clarify their position.

Mr. ANGELL. As I understand it, the chief objection to the Cowlitz comes from the fishing interests, does it not?

Mr. RADIN. Yes, sir. That is correct.

Mr. ANGELL. That is all, Mr. Chairman.

Mr. LARCADE. Any questions, Mr. Smith?

Mr. SMITH. No questions.

Mr. LARCADE. The gentleman from Ohio, Mr. McGregor.

Mr. MCGREGOR. I have a question or two. Mr. Radin, do you know of any private power group in that area that could or would be able to handle this project and give relief to the people and the industries involved in that area?

Mr. RADIN. That is, of the steam plants?

Mr. MCGREGOR. Any. Do you know of any private power group there that would be willing to make this improvement so that they could get the power necessary?

Mr. RADIN. I am not familiar with the plans of the private utilities in the Pacific Northwest.

Mr. MCGREGOR. You are from out in that area, are you not?

Mr. RADIN. No, sir. I am the manager of the American Public Power Association. I am in Washington. I am just reading this statement prepared by the president, who is a resident of that area.

Mr. MCGREGOR. You only represent the public power interests?

Mr. RADIN. Yes, sir. That is correct.

Mr. MCGREGOR. I have one more question. In reading your statement, I cannot help but be in accord with what my colleague, Judge Jones, has stated. In trying to analyze it in my own mind, I feel that you are objecting to the manner in which this power is going to be handled. Is that right? I refer to your second paragraph, your reference to the provisions in lines 8 to 11, inclusive, on page 4. Is that your main objection?

Mr. RADIN. That refers to the rates. That is a matter which I think is of universal feeling of the publicly owned electric systems in the Northwest—that the rates should be subject to the jurisdiction of the Federal Power Commission or subject to review by the Federal Power Commission.

Mr. MCGREGOR. I think that enlightens me quite a lot so I will not ask any more questions.

Mr. LARCADE. The gentleman from Missouri, Mr. Magee.

Mr. MAGEE. I believe Mr. Ward states that he represents 700 local publicly owned utilities systems in 33 States.

Mr. RADIN. Yes, sir.

Mr. MAGEE. When did you have your last convention?

Mr. RADIN. In May of this year.

Mr. MAGEE. No resolutions were adopted at that time on this matter, were there?

Mr. RADIN. No, sir; not on this matter.

Mr. MAGEE. You do not have from any State organization a resolution against it? Out of those 33 States you do not have 1 resolution against it, do you?

Mr. RADIN. Against the steam plants specifically?

Mr. MAGEE. Yes.

Mr. RADIN. No, sir; not that I know of.

Mr. LARCADE. May I interrupt the gentleman? Will you yield?

Mr. MAGEE. Yes.

Mr. LARCADE. I would like to read a sentence from the letter of Mr. Norwood, of the Northwest Public Power Association, which might answer your question. The second paragraph of the letter dated September 24, 1951, reads as follows:

> At a meeting in Seattle on September 20 sponsored by this association representatives of 43 public and cooperative electric systems of the Pacific Northwest adopted a motion to endorse the steam plant bill, H. R. 4963.

Mr. MAGEE. So, right up in this section that would be affected, apparently they favor it. Now, you have about 32 other States in the Union, and not one other State in the Union has stated its position on this question. In other words, when Mr. Ward made this statement, he was not making it as president of the American Public Power Association but making it in his capacity as superintendent of the light division, city of Tacoma, Wash. Is that really the fact of the matter?

Mr. RADIN. He is submitting it as president of the American Public Power Association.

Mr. MAGEE. Yes; but he is not speaking the sentiments of the American Public Power Association, is he?

Mr. RADIN. I think he can determine that as president of the organization.

Mr. MAGEE. Well, I think we will determine that, because there is nothing to back him up. You have got organizations in my State. You have got them in 33 States. The only expression from any State has been in favor of it and not against it. So, as a matter of fact, he is not expressing the sentiments of the American Public Power Association, is he?

Mr. RADIN. I would not say that.

Mr. MAGEE. It is not a question of what he says he is doing. It is a question of what the facts show.

Mr. RADIN. I think the facts show that the Northwest Public Power Association, as evidenced by this telegram, considered that this project should not be considered as displacing the Cowlitz, and that is essentially Mr. Ward's position—that the Cowlitz should come first.

Mr. MAGEE. You heard the chairman just read his statement, the letter which Chairman Buckley received, did you not?

Mr. RADIN. Yes, sir. Subsequently, the president sent this telegram clarifying their position.

Mr. MAGEE. So he is only taking a selfish position in his present official capacity and not as president of the American Public Power Association. The facts bear that out certainly.

Mr. RADIN. I would not impugn such motives to Mr. Ward.

Mr. MAGEE. I do.

That is all.

Mr. LARCADE. The gentleman from Washington, Mr. Mack. Do you have any questions?

Mr. MACK. Your association includes the Cowlitz County Public Utility District No. 1 in the Longview-Kelso area?

Mr. RADIN. I am not sure whether it includes that specific public utility district or not.

Mr. MACK. As a general rule, your association includes all the public utility districts in the State of Washington?

Mr. RADIN. Yes, sir. That is correct.

Mr. MACK. I have a letter here, Mr. Chairman, from Mr. O. G. Hittle, manager of the Public Utility District No. 1, Cowlitz County, which has a population of about 60,000, which endorses the building of the steam plants proposed in this bill. I can secure wires for the record showing that the public utility districts of southwest Washington favor the building of these proposed steam plants. All of them probably are members of your association.

Mr. LARCADE. Is that all, Mr. Mack?

Mr. MACK. That is all.

Mr. LARCADE. The gentleman from Kentucky, Mr. Watts.

Mr. WATTS. I do not believe I have any questions.

Mr. MACK. I submit this letter from Mr. Hittle for the record.

Mr. LARCADE. Without objection, the letter presented by the gentleman from Washington will be placed in the record at this point.

(The letter referred to is as follows:)

SEPTEMBER 26, 1951.

Hon. RUSSELL V. MACK,
House of Representatives, Washington, D. C.

DEAR CONGRESSMAN MACK: This opportunity is taken to express to you the views of the board of commissioners and the management of this public utility district in respect to House bill No. 4963 now under consideration by your Public Works Committee. It is our understanding that this bill would, if enacted into law, provide for the construction and operation of three steam-electric generating plants in this Northwest area to complement the hydro development now in operation and to be in operation as additional hydro developments are completed.

The principle of complementing hydroelectric development with steam generation is well established throughout the electric power industry not only in the United States but in foreign countries as well. It is believed that the combination of hydro and steam now in operation in the Tennessee Valley area is an outstanding example of the application of this principle.

Here in the Pacific Northwest we are exceedingly fortunate in that the Columbia River and its major tributaries, when more fully developed, can provide

hydroelectric resources that will require a smaller proportion of steam supplementation than is usually the case. However, at the present stage of development of the Columbia, and doubtless for several years to come, it appears to be beyond successful contradiction that complementary steam-electric generation is an urgent requirement. As to the total amount of such steam and/or gas generation, we have no suggestion other than that we are in agreement with the amount proposed in House bill No. 4963 since that amount is the total of such steam generation now considered by competent agencies to be proper.

We consider it to be to the great advantage of this Pacific Northwest area for the Federal Government to construct and operate such steam-electric generation as an integral part of the Federal system now, and to be administered, by the Bonneville Power Administration. This is because it would be exceedingly difficult for any of the public utility districts of this State to finance its own steam plant and it would doubtless be equally difficult for any but the largest cities in the State to finance their own steam plants. It could well be that some of the privately owned utilities would find it difficult to finance steam plants to supplement their hydro or purchased power resources. In any event it is a certainty that the distributing agencies of this area would find it necessary to sharply increase their rates for electric service if it were necessary that they finance and operate steam plants as a portion of their electric energy resources. We in Cowlitz County have a $4,000,000 steam generating plant which is now in full operation to relieve the current critical power siutation, but if we were required to enlarge this plant as our area grows it could not be done by ourselves without a sharp increase in retail rates.

A possible solution to the problem of supplementary steam-powered generation (in the event that House bill No. 4963 is not favorably acted upon) would be for a number of public distributing agencies such as our district to jointly finance and construct a steam plant and have it operated as a part of the capacity administered by the Bonneville Power Administration. This would be an expensive and complex undertaking and would also result in a certain amount of rate increase.

It has been indicated in the press and elsewhere that a probable site for one of the steam plants proposed in this consideration may be located at Longview. While we feel that such a plant would find an over-all advantageous location in this section of Cowlitz County, it is far from the purpose of this letter to discuss or urge any specific location for any of the steam plants proposed. It is our purpose herein to present our views as to the importance and urgency of the proposed steam-generating plants as a part of the integrated electric power resources of this entire Pacific Northwest area.

We have tried to set forth these views in the foregoing.

We appreciate the support you are giving to this measure at it goes for hearing before your committee and we hope you will call on us for any help or information we can provide.

Very truly yours,

PUBLIC UTILITY DISTRICT NO. 1 OF COWLITZ COUNTY, WASH.,
O. G. HITTLE, *Manager*.

Mr. LARCADE. The gentleman from California is recognized. Mr. Scudder.

Mr. SCUDDER. Mr. Chairman, I was rather surprised at my friend from Alabama disputing States' rights. You know I do not know how they feel about States' rights in the southern part of our country——

Mr. JONES. We fought a war over it.

Mr. SCUDDER. But coming from California I am for States' rights. I believe, according to the testimony I have heard, that political entities in the State of Washington are ready and willing to do some of the work to firm up this shortage and develop more power, so I cannot see why the Federal Government should move in to try to usurp the prerogatives of the people in that State in order to develop their own power. If there is a willingness on the part of any State to go ahead with the development of their own power, I think that we should give them every consideration.

Mr. SMITH. Will the gentleman yield?

Mr. SCUDDER. Not at this time. I desire to make an observation.

I feel that if there is a grave necessity for this project it might be well to go along, but thus far I am somewhat doubtful as to whether or not it is a case of expanding public power or whether there is a necessity for the development of more electric energy and whether or not it can be developed by steam as cheaply in that area as it could somewhere else.

It seems to me that we have geared ourselves entirely to a war economy. If we are going to have wars the rest of our days, in order to support this economy we should look into areas where we have the fuel for the generating of this peak that is going to develop during our periods of war. Now, of course, if we are going to have wars at all times and if we want to anticipate and expect it, then maybe we should go into a development of steam power to firm up the power that is being generated in the great Northwest.

I would like definite information as to whether we can build power plants cheaper in West Virginia or some place of that sort where they have plenty of fuel and where they could locate aluminum plants and possibly operate at a lesser expense.

I sometime wonder whether this so-called firming-up program is a development for shutting out any possibility of private enterprise or municipalities getting into the power business.

Mr. LARCADE. Thank you, Mr. Scudder.

The gentleman from Michigan, Mr. Machrowicz.

Mr. MACHROWICZ. I have just one comment, I think, in connection with Mr. Scudder's statement. I believe the State has asserted its position in this matter overwhelmingly, as we have been told, by the legislature. I would like to ask the witness whether or not he or Mr. Ward has polled his board of directors to determine their position on the subject.

Mr. RADIN. No. Our board of directors has not been polled on this particular statement.

Mr. MACHROWICZ. It has not been polled?

Mr. RADIN. Not on this particular statement.

Mr. MACHROWICZ. So then you do not know whether this statement reflects the opinion of that board of directors?

Mr. RADIN. I would say this, sir: That our board of directors has adopted a statement of Federal power policy, and that statement of Federal power policy says that hydroelectric resources should be developed wherever it is economically feasible. This statement by Mr. Ward is in consonance with our Federal power policy statement, because these are undeveloped hydroelectric resources which the city of Tacoma is prepared to develop. Our statement says that preference should be given to local public bodies in the development of these resources, and to that extent this statement is in consonance with the statement which is approved by our board of directors.

Mr. MACHROWICZ. Relative to the situation now existing in this particular area, the board of directors has never been polled for expression of its opinion?

Mr. RADIN. No, sir; not on this particular statement.

Mr. LARCADE. The gentleman from Indiana, Mr. Bray, is recognized.

Mr. BRAY. No questions.

Mr. MACK. Mr. Chairman, one more question.

Mr. LARCADE. Mr. Mack.

Mr. MACK. You stated you favored building the hydroelectric plants first?

Mr. RADIN. Yes, sir.

Mr. MACK. Is it your policy that no steam plants should be built in the Pacific Northwest until all the hydroelectric facilities on the Columbia River, a development which probably will require 40 years, are completed?

Mr. RADIN. I do not know that we have adopted a statement applying specifically to the Northwest in that regard.

Mr. MACK. Would you insist that all the hydroelectric developments in the Nation, of which there is a potential of 100,000,000 kilowatts of installed capacity, must be completed before any steam plants are built to firm up hydroelectric power?

Mr. RADIN. Let me clarify the statement. That is, we believe the hydroelectric resources should be developed wherever possible, and here is an undeveloped hydroelectric resource which one of our member systems is in a position to develop, and we believe that it should go ahead with that.

Mr. ANGELL. Will the gentleman yield?

Mr. MACK. I yield.

Mr. ANGELL. But the city of Tacoma itself constructed a steam plant, although the city now wants to put in a hydroelectric plant on the Cowlitz, so it did not follow out that policy that you are discussing. It developed steam-plant generation before it completed the hydroelectric development.

Mr. RADIN. It has a certain amount of steam capacity. I do not know to what extent it is in the total of their capacity.

Mr. ANGELL. So the city of Tacoma did not follow the policy that you mentioned here in this statement but did follow the policy that is recommended in this legislation by Mr. Jackson.

Mr. LARCADE. The gentleman from Idaho, Dr. Wood, is recognized.

Mr. WOOD. Would your organization, in consonance with what has been stated in the letter from your president, rather favor the early completion of the dams on the Columbia which are at present nearly completed, such as McNary Dam, Ice Harbor and Palisades, American Falls and Chief Joseph, rather than the building of the steam plants? Do I understand that is the position of the president?

Mr. RADIN. He has testified before the Senate Appropriations Committee urging accelerated construction of the Federal hydroelectric projects there; yes, sir.

Mr. WOOD. That is all.

Mr. LARCADE. Thank you very much, Mr. Radin.

At this point I have the original letter that was referred to by the gentleman from Washington, Mr. Jackson, from Mr. Gus Norwood, executive secretary of the Northwest Public Power Association, and I ask that it be included in the record at this point.

(The letter referred to is as follows:)

NORTHWEST PUBLIC POWER ASSOCIATION, INC.,
Vancouver, Wash., September 24, 1951.

Congressman CHARLES BUCKLEY,
Chairman, House Public Works Committee,
House Office Building, Washington, D. C.

DEAR CONGRESSMAN BUCKLEY: The current tight power situation and the high probability of heavy power curtailments starting in about 1 week place such a burden upon our operating people so that we cannot send anyone to Washington, D. C., for the purpose of testifying on H. R. 4963.

At a meeting in Seattle on September 20 sponsored by this association representatives of 43 public and cooperative electric systems of the Pacific Northwest adopted a motion to endorse the steam plant bill H. R. 4963.

In addition, the group passed a second motion indicating their preference for modification of the bill so as to retain the present authority outlined in the Bonneville Project Act for the Federal Power Commission to review wholesale power rates. The statement of this preference does not mean that the endorsement of the bill is contingent thereon.

Our discussions of this steam plant proposal were instituted at our Wenatchee convention last April and have resulted in a general consensus that the bill as now drafted would consist of good and desirable legislation.

Our members have repeatedly made the point, however, that they would not wish for the construction of steam plants as an alternative to the much more desirable hydroelectric projects.

Another consideration in endorsing the present bill is that the question of how much fuel-burning generation should be installed and the timing of such installation would be determined subsequent to the enactment of the bill.

I am sure that I express the concern and well wishes of many people in the Pacific Northwest in saying that we appreciate the promptness with which your committee is undertaking these hearings.

Sincerely,

NORTHWEST PUBLIC POWER ASSOCIATION,
GUS NORWOOD, *Executive Secretary.*

Mr. LARCADE. At this point I would like to call the attention of the committee to a telegram addressed to the committee that has just been received this morning. The telegram is dated September 27 at 7:48 p. m. and has only arrived in my hands this morning. It is from Mr. Frank M. Wilkes, president, Southwestern Gas & Electric Co., of Shreveport, La. Without objection, I will read the telegram, and it will be included in the record. The telegram reads as follows:

We understand Secretary Chapman made appearance today before your committee urging expenditure of Federal funds for installation of steam plants in Pacific Northwest with indication that he desires authority to install federally owned steam plants all over the United States. Here in the Southwest there is an abundance of low-priced fuel with 95 percent of the bauxite reserves of the United States. Power plants for production of aluminum should be constructed in this area by private capital either that of aluminum companies or by the taxpaying electric utility companies of this area with proper Government guaranties. Secretary Chapman recently overruled Deputy Administrator McManus and forced location new aluminum companies in Pacific Northwest with we think a sole idea of obtaining general precedent of Federal steam plants for competitive operation against taxpaying utilities. This fight has been going on for years. On account of the importance of this question to the citizens of the Southwest as well as to the electric utility companies operating in this area may we urge on you that we have an opportunity to appear before your committee regarding (1) necessity of steam plants, (2) legality of steam plants, (3) danger of use of this so-called emergency for the socialization of the electric utility industry. If possible please allow us opportunity to be heard.

FRANK M. WILKES,
President, Southwestern Gas & Electric Co.

In view of the fact that this telegram has only been received this morning, it was impossible to advise Mr. Wilkes that we would be glad

to have him appear before our committee to testify. However, I ask unanimous consent that Mr. Wilkes may be permitted to file an additional statement for the record.

Is there objection?

The chairman hears none. So ordered.

The gentleman from Indiana, Mr. Bray.

Mr. BRAY. Would it be possible for him to appear?

Mr. LARCADE. He would not be able to be here before tomorrow, even by air, from Shreveport, La.

Mr. BRAY. Would this matter have to be determined today?

Mr. LARCADE. Well, the chairman had expected that the hearings would be concluded today. What is the pleasure of the committee?

Mr. MCGREGOR. Mr. Chairman, I would like to make a statement. I feel certain there are a lot of people that would like to have submitted their views in regard to this legislation had they known of its being presented for our consideration. Personally, I think that everyone should be given an opportunity to be heard, within reason, and I hope that the committee will delay definite action on this until these people who have wired and maybe others who have read in the paper that it is before us for consideration are given an opportunity to testify. Certainly all have a right to be heard—not just one side. I feel, Mr. Chairman, we should continue the hearings a reasonable length of time.

Mr. LARCADE. The gentleman from Oregon, Mr. Angell.

Mr. ANGELL. This matter is a rather urgent matter, and I think we ought to take action on it, because Congress may not be in session but a few days. If we are going to make any headway with it, we will have to take action now. I certainly insist that we take action soon.

Mr. DONDERO. Mr. Chairman, it is my understanding that the chairman of the full committee is away and that he expects this matter will be decided next Tuesday. He is calling a meeting for that purpose. There would be no unreasonable delay and it would give an opportunity to people to be heard if the committee would meet on Monday.

Mr. LARCADE. Mr. Jones.

Mr. JONES. The statement of the author of the telegram that you have just read to us brings to the committee an issue which is not apparent in this legislation; that is, the age-old proposition of private versus public power. We are not resolving that question here. We are not determining the philosophy of such a program. We are deciding the immediate needs of the area as they presently exist.

If, every time we consider one of these projects, we have to let every public or private power official in this country come in here and make expressions as to what he believes is right or wrong, we should just poll them all throughout the country and have it over with but I think it would be a very long-winded proposition because there would be no final answer. When we got through we would know exactly what we know at the present time.

Mr. DONDERO. Mr. Chairman, I want to reply to my able friend from Alabama by saying there is one point involved in this legislation which is new and that is, for the first time in the history of the Nation, to grant to the Department of the Interior the right to build steam plants in connection with hydroelectric plants. Never before has

that been done, and up to this time it has never been granted, so that it is a broadening of power.

There are only two reasons why the Federal Government can produce hydroelectric power, and those are well known: either national defense or incidental to flood control and navigation.

Mr. ANGELL. Will the gentleman yield?

Mr. DONDERO. Yes.

Mr. ANGELL. There is a steam auxiliary plant in TVA,

Mr. DONDERO. That is a separate agency. You refer to the Johnsonville plant, and we are all familiar with that. But never before to the Department of the Interior.

Mr. LARCADE. The gentleman from California.

Mr. SCUDDER. Mr. Chairman, I feel that we should give consideration to this point, because, as I view this whole program, it is a matter of developing new facilities for the generation of power for the making of aluminum to assist the war effort. Now, if there is a locality in our country where they can produce cheaper, where the available materials are closer for the development of this important metal, I believe then we should give consideration to it. It is possible that you could develop and produce aluminum much cheaper in an area where they have a great supply of natural gas or where they have cheap coal that can be used. I believe the decentralizing of the manufacturing of any commodity should be taken into consideration. I sometimes wonder whether these plants are essential to the war effort or whether the war is being used as an excuse for the enlargement of public power. I believe we should ask the Armed Services Committee to find out if there is such a great urgency; if we do not have an adequate supply of alumnium to carry on the war effort we should encourage its production at places of greatest advantage.

I have read that we have a surplus of aluminum at the present time. I would like to find out whether or not we do have a surplus.

Mr. JONES. Were you here yesterday?

Mr. ANGELL. This, however, is not purely for the question of aluminum. Aluminum, you know, consumes about 40 percent of the power there. These steam plants are for the whole area, to firm up the whole development of hydroelectric power in that area.

Mr. SCUDDER. But this high-priced steam power will be used to produce aluminum.

Mr. ANGELL. No.

Mr. SCUDDER. It would not be necessary to firm it up if it were not for the aluminum.

Mr. ANGELL. It would absolutely. They are having black-outs now.

Mr. SCUDDER. But you are using 40 percent of the entire output for making aluminum, which is going into the war effort.

Mr. ANGELL. That is true, but without the aluminum we would still need to firm up the power. Right now we do not have firm power due to low water for all of our needs. You have to firm it up.

Mr. JONES. Will the gentleman yield?

Mr. SCUDDER. Yes.

Mr. JONES. The statement by the Secretary of Interior yesterday did not predicate the value of this legislation on just the war effort. He went into a discussion of placement of aluminum plants. He emphasized the factors of the increase in population, increase in per capita consumption as the great contributing factors that brought about the need.

Now, Mr. Dondero said that we are having a new proposal here. We would have the same questions if we were authorizing a dam that generated hydroelectric. We would have the same problem, the same contentions by those who oppose it. So we will hear nothing new by getting into an argument over the potentialities of fuel in the Southwest, because we are going to have to utilize everything we have got in this country.

Mr. SCUDDER. I agree to a certain extent with you on that, but it might be that if these people could show that they had available fuel and that the bauxite was handier and did not have to be shipped from one coast to the other for use, they might be able to develop aluminum at a lesser cost, and if that should be developed then I feel we would not be doing the right thing if we did not give consideration.

Mr. JONES. That includes everyone, private or public, in the entire industry. Nobody would say that you could get steam generation at the same rate you could get hydro.

Mr. DONDERO. Would the gentleman yield?

Mr. SCUDDER. Yes.

Mr. DONDERO. Up to this time Congress has never granted money for building steam plants in connection with hydro plants.

Mr. MCGREGOR. Will the gentleman yield?

Mr. SCUDDER. Yes.

Mr. MCGREGOR. I think we are establishing a dangerous precedent by closing the hearings now. We have a request from opposition to this legislation that they be heard. The proponents have had 10 or 11 hours to submit their reasons why the legislation should be passed. If we attempt to stymie the opposition, we certainly are jeopardizing our regular process of legislation. It seems to me that we should give the opponents a chance. I do not know whether I am for or against this bill, but I certainly am against any proposal that is going to attempt to choke off and not give the opposition to this legislation a chance to submit their views.

Mr. JONES. Let them come in season.

Mr. LARCADE. Mr. Scudder has the floor. The gentleman from California.

Mr. SMITH. Will you yield?

Mr. SCUDDER. Yes.

Mr. SMITH. I would like to make a suggestion. As I understand it, the chairman has announced that he was going to call an executive session of the committee to meet on Tuesday to decide on this matter. If we do have anybody that wants to testify Monday, let them testify. That would not delay the legislation.

Mr. TRIMBLE. Will the gentleman yield?

Mr. SCUDDER. Yes.

Mr. MCGREGOR. The present chairman said he was going to try to get some definite action on this bill today, which I certainly will object to. I think that the opposition should have the same number of hours as the proponents. Let them appear Monday if necessary.

Mr. LARCADE. The gentleman from California has the floor. Have you concluded?

Mr. SCUDDER. I yield the floor.

Mr. LARCADE. The gentleman from Indiana is recognized.

Mr. BRAY. Mr. Chairman, I frankly am a little inclined to be at this time in favor of this bill, but I am certainly bitterly opposed to the

idea of rushing the matter through without giving the other side a chance to appear. One member a moment ago said that listening to the other side he was afraid would cause an argument. I certainly trust that our legislative situation has not gotten to the place where we fear that to hear the other side will cause a nargument.

I cannot think of anything more damaging to the bill than when it gets over to the floor for the opponents to show that we gave 11 hours to the proponents and nothing to the other side. Here there is a telegram that should have gotten to you in ample time. If this request of the opponents was turned down, nothing could put this legislation in any more embarrassing position than that, in my opinion.

Mr. ANGELL. Mr. Chairman, will the gentleman yield?

Mr. BRAY. Yes.

Mr. ANGELL. I certainly am not in favor of railroading legislation through, but all the time we have consumed so far has not been allocated to the proponents. The witness we just heard was opposed.

I think the suggestion was made that we hear these people on Monday. If we are not going to meet again until Tuesday, I am quite willing. The only thing that I am concerned about is letting the matter go over until next year.

Mr. LARCADE. What is the pleasure of the committee? Is there a motion to postpone the hearings further beyond today?

Mr. DONDERO. I move that we allow the opponents to come in here at least on Monday if they so desire.

Mr. MAGEE. And that they be notified by telegram just as soon as we adjourn.

Mr. ANGELL. I second the motion.

Mr. MACK. And that the hearings be closed on Monday.

Mr. LARCADE. There is a motion by the gentleman from Michigan, seconded by the gentleman from Oregon, that the committee continue the hearings through Monday for the purpose of giving both the proponents and the opponents any additional time they desire.

Mr. MCGREGOR. Point of order. I think the proponents of this legislation should complete their hearings now so that the opposition could be given a comparable amount of time.

Mr. SMITH. Are there any more proponents?

Mr. JACKSON. Mr. Chairman, may I make a statement?

Mr. LARCADE. The gentleman from Washington.

Mr. JACKSON. In order to be fair about this matter, I think it should be said that ample public notice was given of the hearings. I for one want to have both sides heard. I think that is the only judicial way to approach this matter. But in fairness to this committee, so that no one can say that this committee was unfair in not giving out the necassary information as to the hearings, I would like to invite attention to the fact that all of the people out in the Northwest were advised by wire. I am sure that the National Electric Light Association is fully cognizant of the hearings going on and all their utility members throughout the United States would have ample information.

Mr. MCGREGOR. Will the gentleman yield?

Mr. JACKSON. Yes.

Mr. MCGREGOR. I take it, for example, the gentleman followed the same procedure as when I am the author of a bill. He notifies the clerk to notify those who are in accord with his legislation.

Mr. JACKSON. No; I did not. I think the record will disclose—and if the counsel is here he will indicate—that all sides were advised. I also asked that it be sent to the governors of the three States. It was over the wire, both AP and UP. What would have done? What more could I do?

Mr. MCGREGOR. I think you were very fair. I received a telephone call last night from a personal friend of mine, and he said, "We did not know that that legislation was coming before your committee today."

Mr. JACKSON. How do you give public notice other than to give it to the wire services. Representatives are here of both wire services that were notified, and wires were sent.

Mr. MCGREGOR. I think you have done everything you could do. But in the face of the telegram we have received, I think it would be nothing more than fair that the opposition be given a chance to be heard, because I think if this bill comes on the floor, as so ably stated by the gentleman on our side here, we would be very much embarrassed.

Mr. JACKSON. Mr. McGregor, I agree with you, but I am just trying to defend the committee so it would be clear.

Mr. MCGREGOR. I am not criticizing the committee.

Mr. JACKSON. I want to make it clear that notice was given to the public and that we went out of the way to wire all possible groups both for and against.

Mr. MCGREGOR. I think it is their fault that they are not here. That is where I put the blame.

Mr. JACKSON. The private utilities had ample notice. I think the National Electric Light Association was fully cognizant.

Mr. LARCADE. The next witness is Mr. Northcutt Ely, special counsel of the city of Tacoma, Wash. Will the gentleman proceed? Give your name and the organization you represent.

STATEMENT OF C. A. ERDAHL, COMMISSIONER OF PUBLIC UTILITIES, CITY OF TACOMA, WASH., PRESENTED BY NORTHCUTT ELY, SPECIAL COUNSEL

Mr. ELY. My name is Northcutt Ely. I am a lawyer in practice in Washington, with offices in the Tower Building. I appear here at the request of Mr. C. A. Erdahl, of Tacoma, the commissioner of public utilities of that city, who has sent me a telegram asking me to appear and present his statement. He was unable to be here in time for this meeting. I also have a telegram from Mr. Erdahl directed to the chairman advising him that I would so appear. I ask that these two telegrams be placed in the record.

Mr. LARCADE. Without objection.

(The telegrams referred to are as follows:)

TACOMA, WASH., *September 27, 1951.*

Hon. CHARLES A. BUCKLEY,
Chairman, House Committee on Public Works,
House Office Building, Washington, D. C.

I am submitting a statement relative to H. R. 4963 which I have transmitted to Mr. Northcutt Ely, special counsel for city of Tacoma, who will appear for me orally at hearing Thursday morning. Regret my inability to appear personally. Appreciate very much your invitation to present statement and courtesies extended to Mr. Ely.

C. A. ERDAHL,
Commissioner of Public Utilities, City of Tacoma.

TACOMA, WASH., *September 27, 1951.*

NORTHCUTT ELY,
Tower Building, Washington, D. C.

Confirming our telephone conversation, this wire constitutes full authority to appear as special counsel for the City of Tacoma Department of Public Utilities before a public hearing being held Thursday, September 27, 1951, by the Public Works Committee of the House relative to H. R. 4963. I am advising Chairman Buckley of your appointment and appreciate very much your acting for us.

C. A. ERDAHL,
Commissioner of Public Utilities, Tacoma, Wash.

Mr. ELY. If I may, Mr. Chairman, I will read Mr. Erdahl's statement and following it will make some comments. Then I will endeavor to answer your questions.

This is the statement of C. A. Erdahl, commissioner of public utilities, city of Tacoma:

Rather than to say that I am opposed to the purpose of H. R. 4963, I prefer to take the position that it does not appear to me to be capable of accomplishing the job it is intended to do.

If H. R. 4963 offers an expedient for the solution of the Northwest regional power shortage in the shortest possible time with the greatest resulting benefit to the regional economy and to the need of national defense, then I must accept it as a worthy measure.

But from my own knowledge of the power situation confronting the area and from my own convictions as to what can best be done to expedite additional resources, I am thoroughly convinced fuel-fired generating plants as authorized by this bill are not the answer.

As chairman of the Pacific Northwest Utilities Conference Committee I have reiterated time and again that our area must have additional generating resources and that, if the Federal program of hydro development on the Columbia and its tributaries fails to meet regional requirements, then these must be supplemented by local non-Federal facilities.

What is not fully appreciated outside our own bailiwick is that hydro-generated power is our regional energy base and that low-cost hydro power is accordingly our economic base. Our own region does not produce oil, natural gas, or coal that can be used for electric power generation on any reasonable economic basis. Such fuel must be imported, involving heavy commitments upon transportation by land and by sea.

Our engineers are generally agreed that we can safely go beyond our present fuel-fired auxiliary facilities, now chiefly used for stand-by service, in order to firm up a certain amount of hydro capacity that must now be used intermittently because of stream-flow characteristics. But it is our feeling that this extension must be made in an orderly fashion based upon many practical considerations. Rate structures throughout most of the area are based upon hydro power, with no more regard for fuel-fired resources than is necessary to carry that 10 percent of steam generation in the area designated now principally as insurance.

Any large increment of steam-generated power into the Northwest grid must inevitably reflect itself eventually into the rate structure with potentially sharp upward tendencies, disturbing alike to industry and the residential customer. If I interpret this bill correctly, its purpose is to impose a very substantial increment of steam or fuel-fired generation into our resources within a very short time. I am opposed to that.

I am further convinced that there is a sharp question of feasibility as to whether the fuel-fired generation proposed by H. R. 4963 can be provided in the Northwest to be of material benefit in reducing the existing deficiencies of total generating capacity. And I am further convinced that there are well-advanced non-Federal projects, well in line with the basic economies of the region, that can be brought into full development much more rapidly than the steam plants proposed by this legislation. I refer specifically to the city of Tacoma's Cowlitz River project offering 460,000 kilowatts of installed capacity.

This project, capable of completion within 2 to 3 years, offers a much stronger medicine for power-supply recovery in the Northwest than the proposed steam plants suggested by this bill. I am reliably informed that with steam generat-

ing plants on order from every section of the Nation it will be much more likely we can get earlier deliveries of hydro machines than those for steam generation. I believe DPA and DEPA can show the exact situation in that regard.

The further argument which should appeal to this Congress is that this project is to be fully financed by local enterprise and not at national expense by Federal appropriations, however nice it would be if there were Federal participation in recognition of the potential national benefits to be derived.

I should say that the Cowlitz project is in order in orderly development of the Columbia and its tributaries, that it is in fact sorely needed right now, that its plan and engineering are completed adequately to insure almost immediate start, that the only action which is required from the Federal Government to activate it is the necessary license from the FPC. And this project is now before that body for action, with all major hearings concluded and all but tag ends of evidence fully adduced. I am very sure action of the Federal Power Commission granting the license could be effectively expedited if Interior Department were to withdraw its objections.

I suggest again that I am not opposing the plants proposed in the bill as an additional resource for power in our Pacific Northwest. But I do suggest that they are not orderly, that they propose a potentially serious disturbance to the regional economy, that they involve extensive use of critical fuel and equally critical transportation, and compete with the needs of other areas where steam generated power is the normal, not the unusual, source of energy.

We have long maintained before Congress the importance of fully maintaining schedules for Columbia River hydro development in view of Federal acceptance of utility responsibility and assumption of responsibility for the main power supply of the area. In this session we have opposed cut-backs in appropriations which would seriously retard the program and, in effect, prolong the existing period of deficiency. We will continue to oppose any retraction by the Congress from power-supply developments required by the region in excess of those which its own local utilities can provide under a fully integrated pooling operation in which the Federal Government materially shares the benefits.

Additional steam generation is considered an important part of such a long-range program. It is not a practical "quickie" makeshift to plug a temporary gap in our resources. If approved, the steam generation provided by this bill would inevitably result in reduction of future Federal hydro appropriations until such time as the steam capacity is fully utilized with consequent adverse effect upon power production cost and the regional economy. We cannot agree that fuel-fired steam generation is an economic substitute for hydro generation.

That concludes the statement of Mr. Erdahl.

Mr. LARCADE. It is customary for a witness to submit to interrogation.

STATEMENT OF NORTHCUTT ELY, SPECIAL COUNSEL, CITY OF TACOMA

Mr. ELY. I shall be happy to, Mr. Chairman. Would you like for me to add what I have to say by way of comment now, or shall I answer your questions now?

Mr. LARCADE. You may complete your statement if it is not too long.

Mr. ELY. In the very brief time that this case has been in my hands, I have obtained from the Federal Power Commission the briefs on file there in the case referred to by Mr. Erdahl, and from that appear certain facts that I think are at variance with what impression the committee may have obtained from some of the evidence yesterday.

First, as to the time the Cowlitz application has been pending in the Federal Power Commission.

Second, as to the attitude of the Interior Department with respect to it.

Third, as to its relation to the fishery industry of the Cowlitz River and what might be done about that.

This application was filed with the Federal Power Commission not 1 year ago but 3 years ago. It was filed on December 28, 1948.

Mr. DONDERO. About 3 years ago?

Mr. ELY. December 28. The project is to be fully financed by the city of Tacoma by local revenue bonds. There is no request that the Federal Government build it. The Secretary of Interior was not invited to come in in an area in which there may be local controversy. All he is asked to do is stay out of the controversy. This is a local municipally owned project.

The city of Tacoma has been in the municipal power business since 1893. It has one of the finest systems and the lowest rates of any power system in the United States. It has been a leader in providing by its own resources for the installation of capacity to meet the growth of load in its area. As part of that policy, it filed this application in 1948.

What is the project, where is the Cowlitz River, and how will it affect the problem before you? First, as to the problem the committee has: this bill before you to authorize some 400,000 kilowatts of steam capacity in the Northwest is here because we are in a national emergency with a power shortage on us, power needed to keep the aluminum plants going and to provide for other national defense activities as well as to meet the local commercial power shortage.

That shortage would not exist today had there not been a 3-year delay in action upon this Cowlitz project to provide 460,000 kilowatts, and that project has been delayed 3 years primarily because of the objections filed with the Federal Power Commission by the Department of the Interior, to which I shall come in a moment.

The Cowlitz River enters the Columbia River some sixty-odd miles above the mouth of the Columbia. It drains an area originating in the glaciers of Mount Rainier. Its runoff characteristics and the season of its high and low flow are quite different from the Columbia, with the result that, as the Federal Power Commission staff has found, the power available from the Cowlitz River is firm at times when the Columbia is low, and it will provide from this single project 1,400,000,000 kilowatt-hours of firm energy or 1,500,000,000 when integrated with Bonneville, equal to about a third of the power production of the Hoover Dam, as I happen to know.

The project would consist of two dams, one 120 feet high, the other over 500 feet high, about 13 miles apart upon this Cowlitz River, a tributary of the Columbia.

Now the only objection to permitting this municipality to go ahead with its own expense to meet this power shortage in the Northwest has arisen from the fact that the Cowlitz River is also a stream in which salmon and similar fish spawn, and the industry which is interested in the maintenance of fishing in the Northwest, of course, looks with an adverse eye upon any invasion of the spawning capacity of any of the tributaries of the Columbia, for perfectly understandable and honestly selfish reasons.

What are the fishery industries of the Cowlitz River? What are the resources that this committee is invited to protect at the expense of delaying by 1 to 2 years the supply of 400,000 kilowatts because the

steam program will take that much longer than the hydro program, and at public expense, Federal expense, instead of permitting this municipality to meet the local need itself?

The Federal Power Commission staff has found, based upon the data submitted by the fishery industry, our opponents in this matter, that if these two dams were built the annual damage to the fishing industry would be of the order of $590,000 per year.

Now, the opponents of the city of Tacoma, the fishery industry, submitted some figures on the number of fish involved here, and that works out to about $2.30 a fish.

The city of Tacoma, in order to meet that opposition, offered to install at its own expense facilities to cost $9,450,000 to get the fish up over the dams and on beyond if they want to go, and a hatchery.

The Federal Power Commission has found that the annual cost to the city of Tacoma of maintenance of those fish-preservation facilities is $610,000 per year, again about $2.30 per fish. We are perfectly willing to bear that expense. We do not ask to be relieved of it. But it does indicate the extent to which the city of Tacoma is willing to go to meet that objection.

How big a factor is the Cowlitz River in the fishery industry of the Northwest anyhow? I am told that—this figure is in dispute but I am told that one of the estimates of the fishery production of the Cowlitz River as compared with that of the Columbia River system as a whole is this: That the Cowlitz is responsible for 5 percent of the fishery production of the Columbia River system.

When this application for a Federal license was filed in the Federal Power Commission, what happened? As might be expected, the fishery industry adversely affected by these two dams appeared in their own interest. They are entitled to do so. They have an interest adverse to ours. It is a selfish interest, as ours might be called a selfish interest, and they presented it ably and adequately.

The State of Washington fishery authorities, with their responsibility for protecting the fishery industry, likewise appeared in opposition. But what has primarily caused the 3-year delay in the Federal Power Commission is this: The Department of the Interior permitted two of its officials to appear and testify in opposition to us, and the Secretary of the Interior, the Honorable Oscar Chapman, on May 1, 1950, directed a letter to the Federal Power Commission opposing our program unless and until there should be annexed to the license provisions that the dams should not be built until the program we proposed was approved by the Department of Fisheries of the State of Washington, the United States Fish and Wildlife Service, and so on. That means an embargo.

He made no mention in that letter about the question being a local dispute. Yesterday, Mr. Chapman, for whom I have the very highest personal respect based on an acquaintance over a period of many years, told this committee quite honestly that the Interior Department didn't want to butt into a situation in which there was a local controversy of this character. Nobody is asking him to. Nobody is asking him to. All we ask is that the Interior Department butt its way out of this controversy. They are not obliged to write or appear before the Federal Power Commission and block us. This is a local State matter. There is a local controversy, but the Interior Department need take no part in it.

If the Department of the Interior were to write a letter to the Federal Power Commission tomorrow saying, "This is not a matter of our concern," this license would issue.

If the State of Washington, as was indicated here, desired to litigate, it might do so very speedily. If the State disagrees, if it feels that the protection of the fishery industry on the Cowlitz River—$600,000 per year—is more important than the speedy installation of 460,000 kilowatts, saving a year to 2 years in the preservation of the power industry of the Northwest and the output of the aluminum plants, if the State of Washington believes that it is better to have the aluminum industry saddled with an additional cost for steam power, as Dr. Raver testified yesterday, of 4 cents per pound of aluminum, then the remedy is open for the State of Washington to start an original action in the United States Supreme Court. The Constitution provides that a State may bring an action within the original jurisdiction of the Court. It may sue the city of Tacoma.

The questions are all questions of law. They may be disposed of within 3 to 6 months, and you will have your answer. The answer is known in advance. The Supreme Court in the First Iowa case has passed upon a virtually identical problem involving the right of a State, the State of Iowa, to object to construction of a dam licensed by the Federal Power Commission. The Supreme Court has sustained the Power Commission.

Also, while we are on the subject of litigation, there is pending in the district court in California, involving the San Joaquin River, a question a little bit like this, in the case of *Rank* v. *Krug*. There the fishery interests are demanding that water be released from Friant Dam, part of the Central Valley Project, to maintain the fish in the San Joaquin River.

The Sate Fish and Game Commission filed a statement and took a position very much like that of the State of Washington fishery authorities. And what did the Secretary of Interior do? He asked the Department of Justice to step in and assert the right of the United States to control the waters of the San Joaquin River even though such control might destroy the fish, and said that the Federal power was supreme to that of the State in such a matter.

The Attorney General of California has recently rendered an opinion which I will place in the record, if I may, that the Secretary of Interior is right. And he is right; the United States, in carrying out a constitutional function, is not bound by local State regulation, whether of fisheries or anything else.

So, the merits of this question can be very quickly settled in the United States Supreme Court if there is litigation at all.

Now I come back to this problem of the national defense. That is what is before you. That is all that is before you. We are not in disagreement with Dr. Raver or Secretary Chapman one iota as to the necessity for speedy installation of capacity of some character. If the steam capacity were the quickest, then I would say to you to go ahead and build 400,000 kilowatts, even though we know that the Department of Interior in large part wants this steam capacity and to push aside our Cowlitz project for some 10 years. That is what it really boils down to.

They ask that the Cowlitz project be delayed until experiments can be carried out on other dams at other streams, until the lower Columbia

River conservation program can be tested out. That is a 10-year program.

We would say if steam generated power could be on the line quicker it ought to be put in. This is a problem of national defense. Neither our interests nor the fishery industries' interests nor anybody else's should stand in the way.

There are impartial agencies in the Federal Government which ought to be able to give you a quick answer on that—the Defense Production Administration, the Defense Electric Power Administration, the Federal Power Commission, and so on. I am told by competent people that the orders placed for steam generating equipment are so heavy that the hydro machines, as Mr. Erdahl says, can be supplied a year or so quicker than the steam generating machines. That is the reverse of the ordinary manufacturing situation in the country.

That being so, Mr. Chairman, let me summarize in this way: It may very well be that over the long pull you need steam capacity even up to 400,000 kilowatts, and let us say more, in the Pacific Northwest as insurance, stand-by against breakdown, stand-by against dry years. The idea of the Federal Government building steam plants does not appal me at all. It is committed to the development of the Columbia River as a Federal project, with local participation by such agencies as the city of Tacoma. If steam capacity is required and it appears that the Federal Government is the only one to supply it on a large enough scale, that problem does not bother me especially.

But, where local municipal agencies, publicly owned nonprofit-making, are prepared and willing and axious to assume the burden for providing the hydro generating facilities in this area, when the hydro facilities can come in quicker to meet the war need, when it will not cost the Federal taxpayer 1 dime, why should the Department of the Interior for 3 years block that program and then come before you and say there is now such a shortage that we must have a Department of the Interior steam program to meet this emergency?

We ask your cooperation and your help in getting the Cowlitz project off the sandbar and moving forward. If it is built, if we have 460,000 kilowatts put in in that fashion, then it may still be that you need steam capacity too. I agree with Dr. Raver that these are not mutually exclusive programs at all. But the present emergency is on you because the Cowlitz project has been blocked by the Department of the Interior for 3 years.

Let the impartial experts, the Defense Production Administration or Federal Power Commission or others, tell you how much steam capacity would be needed if the Cowlitz project went ahead. If they say you need both, all right, Let's have both. I have no objection to it being built. But let's not place the consideration of this 400,000 kilowatt capacity program on the basis that there is a shortage now, when that shortage can be met quicker by the Cowlitz project. And let's not be deterred by the fact that there is a controversy between the fishing industry and the requirements of national defense. There is only one answer to that conflict.

Thank you, Mr. Chairman, for listening so courteously. I will try to answer your questions.

Mr. LARCADE. The gentleman from Arkansas. Do you have any questions?

Mr. TRIMBLE. Mr. Ely, if I understand the import of your statement, it is that you want to go ahead with this Tacoma project and postpone this steam project in Mr. Jackson's bill?

Mr. ELY. Not precisely, sir. We want to go ahead and to have your help in going ahead with the Cowlitz project now. If impartial experts from outside the Interior Department—just to put it baldly—say that in addition to that hydro development you need steam too, then I would be for the steam development in addition. But I am not for the steam project in substitution for and displacement of the Cowlitz project, which is its present effect whether declared so or not.

Mr. TRIMBLE. Your position, if I get it, is that a wise and prudent business keeps a reserve for an emergency. Now, you want that reserve that is needed in the Northwest now to be in the form of further hydroelectric projects?

Mr. ELY. No, sir. The base load, the daily kilowatt-hour production should be by hydro because it is cheaper and does not burn up any oil. This 400,000-kilowatt steam program, if it were built into the Northwest power grid as a base load running every day, would account for some 2½ million barrels of oil a year to be burned up, while the waters of the Cowlitz River flow unused to the sea. Now, that is wrong in the national interest. The base load should be hydro. Steam should come in as reserve and to meet emergency.

Mr. TRIMBLE. Is not the wise and sensible course to pursue to have both? To have your steam in reserve just like a wise and prudent businessman? If he is wise, he keeps some reserve for emergency, like we have now. And even though we fight over this dam that you people in Tacoma want, if you get it do you not think it is also wise to provide a reserve?

Mr. ELY. There is no argument about that as a general principle. The question is one of engineering analysis as to how much steam capacity you need as reserve. Obviously if you put in 460,000 kilowatts more of hydro, you need some different figure of steam reserve than if you do not. If you need 400,000 kilowatts of steam now, you are not going to need that much if you put in 460,000 kilowatts of hydro. There is a balance there. You are right in principle; there is no question of it.

Mr. TRIMBLE. That is all.

Mr. LARCADE. The gentleman from Michigan, Mr. Dondero. Any questions?

Mr. DONDERO. I just want to say to the witness that I hesitate to ask you anything because of your very fine and clear statement of the issues.

Mr. ELY. Thank you, sir.

Mr. DONDERO. One question arises in my mind. Can you give the committee the difference in cost between a kilowatt of electric energy by steam and by hydro?

Mr. ELY. In this particular instance, Mr. Dondero, the Federal Power Commission staff has estimated that if the energy which we propose to generate by the Cowlitz project had to be generated by steam instead it would cost $6½ million per year more. Now, somebody has to pay that $6½ million.

Dr. Raver testified yesterday that if the aluminum plants were dependent upon steam instead of hydro-generated electricity, it would cost them about 4 cents per pound of aluminum more.

If we multiply $6½ million per year times the amortization period that is talked about here of 35 years, you get into a figure of something like $200 million as the added cost to the consumer over that amortization period, between the two sources of energy.

Mr. DONDERO. That is if you have to depend on the steam entirely?

Mr. ELY. That is correct, sir.

Mr. DONDERO. That is all.

Mr. LARCADE. The gentleman from Minnesota, Mr. Blatnik, is recognized.

Mr. BLATNIK. One of the questions I had was one asked by Mr. Dondero—the comparative rates or the relative increase in your base load rates if you have these 400,000 kilowatts by fuel-fired electric plants in comparison to your proposed hydro plant.

Mr. Ely, how is this local controversy involving this conservation matter of fish, fish life, fish propagation handled? Has that been resolved by your State legislature or your State conservation department or your State power authorities?

Mr. ELY. No; I regret to say that it has not and cannot be solved locally. I have heard the testimony here that the State legislature passed a law, which it did, reserving the tributaries of the Columbia below McNary Dam as a fish sanctuary, and providing that no dam would be built on any of those tributaries higher than 25 feet. Now, that State law, whatever might be its justification from the viewpoint of the local interest, is diametrically opposed to the national interest of the United States—to tie up all the power resources of these tributaries of the Columbia River in that manner, for such a relatively minor interest which is opposed to them.

I wish I could tell you that this controversy had been resolved locally or could be. I cannot give you any such assurance at all.

Mr. BLATNIK. Does it require approval or some authorization by your State legislative body? Is it true that all you require is a license by the Federal Power Commission?

Mr. ELY. I am glad you raised that point, sir. The issuance of a Federal Power Commission license is all that is required to permit us to construct the project. The concurrence or consent of the local State officials is not required. That is settled by the decision in the first Iowa case, the citation of which I will place in the record, by the United States Supreme Court. The Federal Power Act does require the Federal Power Commission take cognizance of local objections or interests, but it is not bound by them.

Mr. BLATNIK. Will the city of Tacoma foot the entire cost of construction and subsequent maintenance and operation?

Mr. ELY. It will, sir, not only of the power dams but also of the added $9,500,000 cost of the fish-protection works.

Mr. BLATNIK. And will these be integrated with the Federal power network in that area?

Mr. ELY. They will, sir. They are interconnected now, and all of our facilities will be, so that the full 460,000 kilowatts we are talking about here would be available in its entirety to aid the power requirements of the whole Northwest, not just the city of Tacoma.

Mr. BLATNIK. How would the cost of power production on your municipally owned plants compare with the cost of the Federal projects?

Mr. ELY. The Federal rates at Bonneville were established at roughly a basis of equality with the rates previously established by the city of Tacoma. We were there first. Our rates were the lowest in the United States. The Bonneville Power Administration established rates which roughly paralleled ours.

Mr. BLATNIK. You referred to impartial experts outside of the Department of Interior?

Mr. ELY. Yes.

Mr. BLATNIK. Were they to look into this whole matter?

Mr. ELY. I should think that in a matter of this gravity the committee might well call upon the experts of the Federal Power Commission. I do not mean simply their executive personnel on policy questions such as you heard yesterday, but their expert staff, their engineers. And, second, they might well call upon the Defense Production Administration, which has a responsibility of deciding whether these critical materials are going to be earmarked for steam turbines to be installed here when steam turbines are required in other parts of the country that hydro cannot replace, or whether, to the contrary, they prefer to see the critical materials devoted to hydro generating capacity to be installed on the Cowlitz River at a much earlier date than steam could be supplied. That is a defense problem. And I would say that the National Production Authority or the Defense Production Administration might be in a position to give you advice on that. I have not consulted them. I am just suggesting that.

Mr. BLATNIK. You mentioned experts in the Power Commission. Would they not in the normal course of processing an application for a license such as this make their own study of the entire situation?

Mr. ELY. Yes; they would, sir, and they have. There are briefs and reports, which I hold in my hand, prepared by Willard W. Gatchell and John C. Mason of the staff of the Federal Power Commission, which, if this committee would take the time to read, you would find extremely enlightening. They are among the ablest briefs from a lawyer's standpoint, I have ever encountered. They are perfectly devastating on all of the questions raised here in the last few days.

The engineers of the Federal Power Commission were consulted in preparation of those, and those engineers, you are quite right, do in the normal course examine those projects in detail. They have examined this one. And they report it is admirably fitted in every respect for the comprehensive development of the Columbia River and its tributaries save for this one single objection with respect to fish.

Mr. BLATNIK. In your plans for your project as they now exist or as presented to the Federal Power Commission, do you include this $9,000,000 expenditure for facilities to enable fish to migrate upriver beyond the dam?

Mr. ELY. They do, sir. Those facilities are based upon similar facilities installed by the United States at its own dams on the same river system. And I might say that the Secretary of the Interior did not find any objection, based on the fishery interests, to the construction of these dams referred to here in testimony yesterday—The Dalles and Ice Harbor. They are on the main stream of the Columbia where the fishery industry is far more important. We have 5 percent of it on the Cowlitz. Somehow, the objections that the Secretary finds

insurmountable for us seem to evaporate when he is talking about dams to be built by the Federal Government.

Mr. BLATNIK. One more question. Am I correct in assuming that you are not opposed to H. R. 4963, which would provide for fuel-fired auxiliary facilities, but your contention is you are all set to go with additional hydroelectric capacity and it is merely timing and you feel you should be allowed to proceed at once after a 3-year delay, and that if the demand for power justifies it, if you have a shortage and you need a broadening of your base power, then you feel that perhaps later on fuel-fired facilities would be in order?

Mr. ELY. Exactly, sir. And if the impartial experts from outside the Interior Department take the responsibility for telling this committee that even if the Cowlitz project is built there should be more steam, I would accept that.

Mr. BLATNIK. Thank you. Thank you, Mr. Chairman.

Mr. LARCADE. Thank you.

The gentleman from Oregon, Mr. Angell.

Mr. ANGELL. Mr. Ely, I want to compliment you on a very fine statement. You were certainly very fair, very concise, and certainly very informative to the committee.

Mr. ELY. Thank you.

Mr. ANGELL. What is your connection with this project?

Mr. ELY. I am a lawyer in general practice here in the city of Washington. I appear here as special counsel for the city of Tacoma in this particular matter, at the request of Mr. Erdahl.

Mr. ANGELL. Are you appearing for the city as counsel in its application for securing a license?

Mr. ELY. I have not; no, sir.

Mr. ANGELL. I think that my position is not far removed from that you have expressed. I am not in favor of this project as a substitute for the Cowlitz or any other hydroelectric project on the Columbia or the tributaries of the Columbia. I am supporting it because I believe in the interest of economy and wise public policy. With the hydroelectric power generated by the Federal Government and the large investment we have, we should have these stand-by facilities available in times of stress such as we are passing through now—not, however, as an emergency matter to provide additional power now for aluminum or war emergency, because we are hoping that the war emergency may be over before these are constructed, but as a long-range policy in firming up hydro power in the development of the great hydroelectric projects in the Columbia River territory, which have 40 or 50 percent of the potential hydro power in the United States.

In the interest of economy and wise judgment and business management we should have these stand-by facilities just as Tacoma has in its hydro system.

Mr. ELY. Thank you, sir.

Mr. ANGELL. That is all.

Mr. LARCADE. The gentleman from Missouri, Mr. Magee, is recognized.

Mr. MAGEE. I believe that perhaps Mr. Mack would come near to answering this. I understand that they claim these fish ladders or whatever they use have not been successful. Do you know about that?

Mr. MACK. That is not altogether the claim, Mr. Magee. The contention is that no system of getting fish upstream and downstream without loss has been perfected. The fisheries authorities of the State of Washington say that they would like to have more time to give more study in order to perfect the methods of getting fish upstream and downstream without their destruction.

Mr. ANGELL. Will the gentleman yield?

Mr. MAGEE. Yes.

Mr. ANGELL. Is it not true that the fish ladders in the dam at Bonneville is working out very satisfactorily?

Mr. MACK. As far is getting fish upstream, yes; but not so effective getting them down. Fifteen percent of the small fish that come downstream are destroyed as they pass through the dams.

Mr. ELY. The State of Oregon, like Washington, proposed legislation to prohibit power development on tributaries and it was rejected.

As to the point Mr. Mack made as to the desire of the fishery industry for time to test out various methods, I can only say that the showing they made before the Federal Power Commission is that they want a program of investigation and development set for the lower Columbia River program to be carried out, and that is a 10-year program. Also they want to have the vorious devices we are proposing tested out on some other dams some place else. I do not know who is to build the dams or where. They want that done before they are used on the Cowlitz. If you do that you just consign 460,000 kilowatts down the drain for an indefinite period.

Mr. MAGEE. I assume you do not have any definite information as to when the Federal Power Commission might render a decision?

Mr. ELY. The hearing before the Commission itself is to take place on October 31. How quickly after that it renders a decision I do not know. I might just hazard a guess that if the Secretary of Interior withdrew his opposition you would get a very quick answer. The Federal Power Commission is plagued by the fact that in some seven or eight cases over the United States in which municipalities like my clients are seeking licenses for hydro development the Department of Interior is opposing them for one reason or another. In the face of that interdepartmental controversy over local public development versus Federal development, the Power Commission moves rather slowly. If that issue were removed here, I think we could expect a very quick decision from the Federal Power Commission.

Mr. MAGEE. I think you have made a very fine statement. I realize—I think we all do on the committee—that hydro power is what we would like to have first of all.

I believe that is all.

Mr. LARCADE. The gentleman from Ohio, Mr. McGregor.

Mr. MCGREGOR. No questions, other than to compliment the witness on his splendid statement.

Mr. ELY. Thank you, sir.

Mr. LARCADE. The gentleman from Kentucky, Mr. Watts.

Mr. WATTS. It is an admitted fact that you do need some more power out there from some source?

Mr. ELY. Unquestionably, sir. The Federal Power Commission in this very case of ours has reported that if you had a critical water year in 1950–51, the year we are in, you would have right now a shortage of some 450,000 kilowatts.

Mr. WATTS. And according to the statement you made, I gather that there are two methods by which it can be obtained; by your dam that you spoke about for the city of Tacoma, and by the steam-generating plants that are being considered?

Mr. ELY. In general; yes, sir.

Mr. WATTS. And your fear is that if Congress authorizes the construction of the steam plants that it will delay the construction of the project that the city of Tacoma is interested in? Is that correct?

Mr. ELY. That is part of the situation. Basically, it is a little different. The shortage that occasions your present consideration of this bill is here on us because the Cowlitz project has been held up as long as it has. If the Cowlitz project is turned loose and built now, it can be built and put in operation before any steam project could be. Second, if the Cowlitz project is built, it becomes a question of engineering judgment as to whether you need 400,000 kilowatts of steam capacity at Federal expense or some lesser capacity.

Mr. WATTS. The only opposition you have to it, as you have stated, is that insofar as it would interfere with the building of the dam? Is that right?

Mr. ELY. Well, as I understand what Mr. Erdahl is saying here, it goes further than that: That if the steam capacity is built in as a base load, as part of the underlying power resource of the Northwest, to the extent of 400,000 kilowatts, you not only are committed to burning up a whole lot of fuel but you are increasing your costs sharply upward for the whole Northwest, and that, consequently, to the extent that steam is put in, as base load plants, not as stand-by for emergency only, if you put in a Federal plant of 400,000 kilowatts you are going to have a devil of a time persuading Congress later to appropriate money for 400,000 kilowatts of hydro capacity for Federal plants. I am not talking of the Cowlitz plant but of Federal hydro plants elsewhere on the Columbia River system.

It is bad policy, if I understand Mr. Erdahl correctly, to now earmark and dedicate Federal funds and commit them to steam generation for 400,000 kilowatts if you do not have to, and he says you do not have to because the city of Tacoma is prepared to supply an equivalent quantity of capacity quicker and at its own expense.

M . WATTS. There is a lack of a certain number of kilowatts of firm power. We do have those kilowatts in certain portions of the year now. Is that true with the dams that are there?

Mr. ELY. As I understand it, there would be a continuing power shortage in the Pacific Northwest if the water years were low or below normal for a long time to come, and the degree of actual shortage in any 1 year, as Dr. Raver indicated yesterday, depends on what luck you have in your water supply, your run-off. There is right now a shortage in capacity and a shortage in kilowatt hours.

Mr. WATTS. I would be led to believe from some of the testimony I heard prior to yours that the purpose of constructing these steam plants was to firm up the larger amount of power that is usually produced by the hydroelectric generators and that this power was not to

add to the top amount that could be produced by hydroelectric but was merely to fill the gap at times when the hydroelectric was not producing its full capacity and probably would not be in operation at all times. Is that the true situation as you understand it?

Mr. ELY. Well, in part, sir. It gets to a question of definitions. If you have a peak load of so many hundred thousand kilowatts and you have hydro capacity which will meet that peak load if you are lucky and have good water years, then you may say that 400,000 kilowatts of steam to be put in is only to be operated in the years of low water and to that extent it is, let us say, standby.

On the other hand, if you calculate that your dependable capacity from hydro is some lower figure, then obviously if you are going to meet a peak load higher than that figure you are going to run the steam plant a large share of the time.

It is very difficult to give you any answer that is really informative on this question of how the steam plant would be operated. But Mr. Erdahl's point on that is that the Cowlitz River has different stream flow characteristics from the Columbia, and the Federal Power Commission staff has found its firm power would be available at precisely the times of the year seasonally when the Columbia River hydro power is off. Consequently, the Cowlitz River project would firm up the hydro plants seasonally on the Columbia River.

Mr. WATTS. The present source of power for the city of Tacoma is what? Water power?

Mr. ELY. Primarily, yes, sir. We have some 10 percent of our capacity, I believe in steam, it is used primarily as standby for emergency.

Mr. WATTS. That is for firming up?

Mr. ELY. Again it is a question of definition. If we have normal water years, no; it is there as stand-by in case of breakdown. If you have low water years or if your demand grows faster than you get hydro capacity in, of course, you keep your steam plant running.

Mr. WATTS. I believe that is all I have.

Mr. LARCADE. Thank you, Mr. Watts.

The gentleman from Washington, Mr. Mack, is recognized.

Mr. MACK. Mr. Ely, you read a statement that was made by Mr. Erdahl?

Mr. ELY. Yes, sir.

Mr. MACK. Mr. Erdahl occupies a dual public capacity in the area. He is commissioner of public utilities of the city of Tacoma and at the same time he is the chairman of the Pacific Northwest Utilities Conference. In this statement which you read from Mr. Erdahl I assume he is speaking as the commissioner of public utilities of the city of Tacoma and not as the chairman of the Pacific Northwest Utilities Conference. In other words, I do not believe in his statement he is speaking for the entire group but he is speaking only for the utility of the city of Tacoma. Is that not correct?

Mr. ELY. I think that is correct, sir.

Mr. MACK. How large a city is the city of Tacoma?

Mr. ELY. I would have to bow to you on that, sir.

Mr. MACK. I think that Tacoma has a population of about 150,000. Tacoma is one of the most rapidly growing communities in one of the most rapidly growing States in the Nation.

Do you know if your public utility in Tacoma serves the outlying areas such as Puyallup, Sumner, and the communities around there?

Mr. ELY. Again, sir, your information would be more valuable to the committee than mine.

Mr. MACK. The city of Tacoma has a power shortage itself and is in need of additional power. Is that not so?

Mr. ELY. I think that is correct, sir. If I might interrupt, from the Power Commission studies it appears that the capacities that the cities of Seattle and Tacoma combined would be short by 1953 at the latest.

Mr. MACK. If you go ahead and build these dams on the Cowlitz River, would it be your idea then that the Federal Government go ahead and build the steam plants also?

Mr. ELY. Well, as I tried to make clear earlier, if this committee obtained impartial advice from without the Interior Department, from Government experts, that steam capacity is needed in addition to the Cowlitz project, then go ahead and build it to meet national defense. Neither our interest nor anything else should stand in the way of that.

Mr. MACK. Now, asking the question in reverse, if the steam plants are built, do you not think that the city of Tacoma would go ahead and build the Cowlitz power dam anyway?

Mr. ELY. We would——

Mr. MACK. If they get permission to do it?

Mr. ELY. That is the rub. If the steam plants are built, I have every expectation that the Interior Department would stand firm on the roadblock it has put in before the Federal Power Commission, and we would not get our license for a time. When, as, and if we get our license, yes, we will build.

Mr. MACK. Mr. Raver said yesterday during his testimony that the existing shortage of power in the Pacific Northwest in all probability will continue beyond 1957. In that event, there will be a need, if you can get your permit, for the construction of both the steam plants and of the hydroelectric plant?

Mr. ELY. That is correct, sir, but let me qualify that. We are confronted, and this committee is confronted, with the problem of a national emergency on power. The problem is how quickly you can get it. If our hydro is put in, the emergency is met at least a year quicker than if you rely on steam power, because you cannot get delivery on the steam units as quickly as you can on the hydro units.

Now, if we do put the Cowlitz in, the next problem is how quickly does the next hydro power come in on the Columbia River. I do not know whether you would still want 400,000 kilowatts of steam if the Cowlitz project went in. I assume you would need some lesser quantity.

Mr. ANGELL. Will the gentleman yield?

Mr. MACK. Yes.

Mr. ANGELL. The gentleman will recall that yesterday Dr. Raver also testified that an increased demand for power on the Columbia River each year is increasing by the capacity of a Bonneville Dam, which is some 500,000 kilowatts.

Mr. ELY. Our own system load is increasing at the rate of 10 percent, compounded annually. We double our load every 7, 8, or 9 years. It is phenominal.

Mr. ANGELL. So with both Cowlitz and the steam plants we would be short of power by 1955?

Mr. ELY. If you get Cowlitz in, you may still need steam, but it may be less than 400,000 kilowatts.

Mr. MACK. There is considerable controversy, of course, between the fish people and the people who want to build the dam on the Cowlitz. The State legislature acting upon the matter made the Cowlitz River a fish sanctuary in order to block at least at this time, the building of these dams on the Cowlitz. In the vote creating the Cowlitz River as a fish sanctuary there was only one vote opposed to creating the stream as a fish sanctuary in order to block the building of the dams on the Cowlitz.

Now, the State of Washington Fisheries Department and the State administration in the State, are all violently opposed to the construction of these Cowlitz dams. Is it not most probable that, feeling very strongly against the construction of these dams, the State will exercise every legal means at its disposal to delay or stop construction of these dams on the Cowlitz? Is that not likely that many months will be devoted to the wrangle between opposing lawyers to get the matter finally settled in the courts?

Mr. ELY. I think your question is very fairly stated, Mr. Mack. I may make this reply: first, if I may respectfully suggest it, you are sitting in a national legislature. The State legislature, it is true, took the action you described. The responsibilities of this committee and of the Congress are quite different: primarily national defense. If the Cowlitz project can get on the line a year quicker than the steam capacity, if the aluminum production is dependent upon that added capacity, then the fact that the legislature of the State of Washington endeavored to protect its fishery industry by placing a complete embargo upon the development of the water resources of the tributaries below McNary Dam whether by the United States, by local interests, or anybody else, should not stand in your way.

The Constitution entitles you to override the decision of the local interests in the protection of the national interests.

Now, as to the question of whether the local interests would succeed in delaying this project by litigation, it seems to me the very same answer applies: that the United States Supreme Court will assert again, as it did in the first Iowa case, as it did in *Arizona* v. *California* (283 U. S.), that the Federal decision overrides the local State decision and the project should be built. I have no doubt, Mr. Mack, as to the outcome, and I realize how dangerous it is to predict the outcome of a lawsuit.

Mr. MACK. But it may take considerable time.

Mr. ELY. As to the time, if the State of Washington wants an expeditious determination of this issue, it may file a petition for leave to file an original action in the Supreme Court at any time. It may get a decision on the question of law in a matter of 3 to 8 months. The Supreme Court handed down the decisions in the four Colorado River cases in periods of from 3 to 8 months on questions of law in original actions.

Mr. MACK. It seems to me you have injected into the discussion something that is entirely outside the province of the Congress of the United States. The Cowlitz River decision, the decision of whether or not these Cowlitz dams are going to be built, lies not with the Congress of the United States but with the Federal Power Commission, which is a quasi-judicial organization. The Power Commission must make the decision and not the Congress as to whether

the Cowlitz dams are to built or as to whether you are to be permitted to build the dams.

Mr. ELY. Your suggestion has a good deal of logic to it, but we are prevented for 3 years from getting a decision from the Federal Power Commission because a Federal administrative officer, the Secretary of Interior, puts in a road block.

Now, this committee has jurisdiction over Federal officials. You can, if you want to, get that road block out of the way for us. If you do, the license will issue promptly. And if the license issues promptly, then we will build the Cowlitz project and you then can reconsider whether you want to add 400,000 kilowatts of steam capacity at Federal expense or some lesser quantity or how you want to time it.

While I am on that point, let me add that I have the deepest respect for Secretary Chapman. He is a man of his word. That is a great Department, very large, with many bureaus and divisions in it, and sometimes they are pulling in somewhat different directions. Secretary Chapman signed this letter which I am placing in the record, but I don't say he wrote it. It is the viewpoint of the Fish and Wildlife Service, who have a very legitimate but limited interest here. And I add that I further have the highest respect for Dr. Raver. With what he said yesterday, we are not in substantial disagreement.

Now, obviously, the views of Dr. Raver on one hand about this power shortage and need for meeting it, and of the Fish and Wildlife Service on the other—"do not put dams on the Cowlitz River because you will upset $2.30 per fish worth of fish"—are just in diametric opposition. We think that the committee might very well invite the Secretary of Interior to give us some help instead of standing in our way.

Mr. MACK. You have said that the Department of the Interior, meaning presumably Mr. Chapman, has placed a roadblock against the construction of these Cowlitz dams. Now, as a matter of fact, Mr. Chapman was called upon, was he not, to render an opinion as to how he believed the best interests of the country would be served and in reply to that inquiry he fulfilled his responsibility and gave a frank report on the situation as he saw it?

Mr. ELY. I am not criticizing the procedure followed, and I do not think the procedure is particularly important. The fact is that he wrote the Federal Power Commission on March 30, 1950, and he wrote it again on May 1, 1950, and there is not a word in those letters about his staying out of this because of a local controversy. He jumped right into the middle of it and objected to the issuance of a license until the fishery situation was protected.

Mr. MACK. He did that only when he was asked for his opinion on the matter, did he not?

Mr. ELY. As to why and how he wrote the letters I cannot say, but I do know that two officials of the Fish and Wildlife Service testified during the hearings before the Federal Power Commission, and the position of those two officials plus the Secretary of Interior's letter is the peg upon which the examiner found that the license should not be issued. The only objection is because of the fisheries, and the primary objections that he cites are those I referred to.

Mr. MACK. The examiners' reports to the Federal Power Commission I think sustain the view of the State, do they not?

Mr. ELY. The State and the Secretary of Interior, yes.

Mr. MACK. The examiners——

Mr. ELY. The examiner. There is one examiner. This was a trial before an examiner. The Commission's staff supported the position of the city of Tacoma 100 percent. The examiner in rendering his report on July 19 of this year held with us 100 percent upon our allegations of the power capability of the system, its adaptability to the comprehensive development of the Columbia River, and stated it was an admirable development. He held against us on this interference with the fish.

Mr. MACK. I agree with you that the Cowlitz River is a good power stream, but the question of whether the public utility of Tacoma should be permitted to build dams on the Cowlitz is a matter for the Federal Power Commission to decide and not for the Congress of the United States to decide. Neither this Congress nor this committee can go before Mr. Chapman and ask him to change what he believes to be a sound economic view as to the relative importance of fish preservation and power development.

Mr. ELY. But my point is if the Federal Power Commission orders this license issued, your problem drastically changes. You are no longer confronted with the necessity of providing 400,000 kilowatts of steam to meet an immediate defense emergency at all. Your problem then becomes, shall you provide steam as a long-range stand-by.

Mr. MACK. The whole issue, it seems to me, boils down to this contention of the fishing interests and the communities dependent, that those dams should be built in the Columbia River Valley first that interfere least with the fish runs. The fishing interests and the fishing communities say we should hold back, that we should build first the dams that will not interfere with the fish runs, and then later construct the dams that may interfere with fish runs. If we do that, then the State fisheries department and the other fish scientists will have time to develop and perfect methods of getting the fish upstream and downstream without destruction of the fish population of the river.

Mr. ELY. That is an understandable viewpoint, and I would have considerable sympathy with it if we were not faced with the need for four-hundred-thousand-odd kilowatts right now for national defense. The Cowlitz River is the place you can get it quicker than by steam. And shall the national defense be imperiled out of consideration for $600,000-a-year fish industry?

Mr. MACK. I would dispute whether you could get the power first on the Cowlitz due to the legal difficulties involved. In any event, the element of time between the completion of the steam plants, which was estimated yesterday I think at 2 to 3 years, and the completion of the Cowlitz dams would be a matter of months rather than of years.

Mr. ELY. There is about a year's margin involved, a year or a year and a half, assuming that the priorities would be issued for steam equipment in this area. That is an open question.

Mr. MACK. I appreciated very much the fairness and frankness of your statement.

Mr. ELY. Thank you very much. I appreciated the fairness of your questions. I realize the responsibility you have to your local problem.

Mr. LARCADE. The gentleman from Michigan, Mr. Machrowicz.

Mr. MACHROWICZ. I believe Mr. Mack has covered the matter in which I was interested.

Mr. LARCADE. The gentleman from California, Mr. Scudder.

Mr. SCUDDER. Mr. Ely, you straightened out quite a number of questions that have been revolving in my mind regarding the justification for this steam project. I would like to try to pin-point two questions. How long would it take to complete the Cowlitz plant?

Mr. ELY. Our engineers, and the Federal Power Commission staff is in agreement with them, say, it would take approximately 2 years to get the first unit on the line.

Mr. SCUDDER. How long would it take to construct the steam plants and get them in operation?

Mr. ELY. Assuming that the priorities were obtainable and that the steam generating equipment could be obtained at all, the estimate is that it would be 3 years and upward before power would be on the line from that source.

Mr. SCUDDER. Now, the development of the steam plants would be how much? Four hundred thousand kilowatts? Is that correct?

Mr. ELY. That is correct; 400,000 kilowatts is the aggregate of the steam plants.

Mr. SCUDDER. The whole steam plant program?

Mr. ELY. In this bill.

Mr. SCUDDER. And the Cowlitz plant would develop about 460,000 kilowatts?

Mr. ELY. The initial installation 345,000; the ultimate, 460,000.

Mr. SCUDDER. In accordance with your statement then, the power developed on the Cowlitz would be practically a firm production, would it not?

Mr. ELY. Yes, sir. That is the report of the staff of the Federal Power Commission.

Mr. SCUDDER. In other words, it would pick up the entire load which is now contemplated to be developed through steam plants?

Mr. ELY. Yes. In extreme low-water years, the 345,000 kilowatts of installed capacity would have a dependable output of about 275,000. The 460,000 kilowatts of installed capacity would have a dependable output of 400,000 or slightly less. The firm power output is of the order of 1,400,000,000 kilowatt-hours. In other words, the two programs——

Mr. SCUDDER. Then it would be reasonable for us to assume that the Cowlitz plant would be just as good if not a better stand-by than the entire steam production now contemplated by this bill? In other words, I believe in the development of the various projects step by step, and, as my colleagues have stated, these plants to be built along the Columbia River would still be dependent upon the steam plant to firm up what they will construct in the future as this program goes along. But if the Cowlitz plant is built, you have the firming up without any expense to the Federal Government and you have the same or greater kilowatt production than the steam plants could produce and would not have to depend upon the consumption of coal or oil or some other fuel for the operation of the plants.

Mr. ELY. That is substantially correct, sir. Two and a half million barrels of oil annually to replace Cowlitz hydro energy.

Mr. SCUDDER. I rather surmise that if the steam plants are built there will be some reason to withhold construction of the Cowlitz plant. I think there is just a little power politics in some of these proposals.

That is all, Mr. Chairman.

Mr. LARCADE. Thank you, Mr. Scudder.

The gentleman from Kansas, Mr. George, is recognized.

Mr. GEORGE. Are we assured of a firm water supply on the Cowlitz River project? The problem has been caused on the Columbia due to a lack of rain, has it not?

Mr. ELY. I think that is true, yes. The Cowlitz has quite a different watershed. You cannot guarantee it is going to rain there either. But the records of the two stream systems have been reduced to very dependable forecasts as to firm power output. The shortage on the Columbia River is not due to any bad guesses by Dr. Raver's organization or anybody else's. That is, they did not assume there was going to be a certain water supply and it turned out there was less. The fact is that on the Columbia we have been living on borrowed time, because we had some wet years. Everybody has known that if you had dry years you were going to run into a very critical shortage, and that is what has happened now. The installation of new capacity has not kept up with the growth of the load.

The best estimates on the Cowlitz River are those I have just given you from the Power Commission staff. In other words, those are the estimates for critical years when you might expect low water.

Mr. GEORGE. Is the Cowlitz River in a normally high rainfall area?

Mr. ELY. Yes. It drains the area from Mount Ranier south, and it is an area of very heavy rainfall.

Mr. GEORGE. Your heavier rainfall is in the fall of the year when the other river normally has a lighter runoff?

Mr. ELY. The seasons of peak runoff are different on the Cowlitz and Columbia, and the two complement each other very well.

Mr. GEORGE. I notice in quite a bit of your testimony as to the legality of what might happen you cite the Supreme Court decision in the Iowa case. Was that dated back several years ago or as the Supreme Court is now constituted?

Mr. ELY. As now constituted, sir. I will give you the citation here. The decision is *First Iowa Hydroelectric Cooperative* v. *Federal Power Commission* (328 U. S. 152, 1946). There was subsequently a decision on denial of certiorari: *State of Iowa* v. *Federal Power Commission* (339 U. S. 979, in 1950).

That case arose after the United States Circuit Court of Appeals for the Eighth Circuit had affirmed the order of the Commission granting a license, like that we are discussing here, in 178 Federal second, 421, in 1949.

Mr. GEORGE. Thank you, sir. That is all.

Mr. LARCADE. Thank you for the fine presentation you have given us, Mr. Ely.

Mr. ELY. I appreciate the courtesy and patience the committee has shown.

Might I include in the record a copy of the letter from the Secretary of Interior which I referred to? I will supply that later.

Mr. LARCADE. Without objection, so ordered.

(The letter referred to is as follows:)

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., May 1, 1950.

Hon. NELSON L. SMITH,
Chairman, Federal Power Commission,
Washington, D. C.

MY DEAR MR. SMITH: Supplementing the Department's letter to you dated March 30, 1950, regarding the application of the city of Tacoma, Wash., for a license for a proposed water power project, No. 2016, located on the Cowlitz River in Lewis County, Wash., officials, engineers, and biological consultants of the city have now met and during the past several days discussed with members of the staff of the Fish and Wildlife Service the city's fisheries plan to which reference is made in Acting Secretary Warne's letter, a summary report of which has now been filed with the Fish and Wildlife Service and I understand with the Federal Power Commission. This plan, as now proposed by the city, includes the construction of fish-passing facilities as shown in the revised drawings submitted with the Commission's letter to the Department dated February 16, 1950. These drawings constitute major changes in the design of the Mossyrock and Mayfield Dams in the interest of migratory fish.

The discussions between the city's representatives and those of the Fish and Wildlife Service were exceedingly frank and carried on in a spirit of utmost cooperation. The city has exhibited a most commendable desire and its engineers and biologists have made a determined effort, after studies of the conditions on the Cowlitz River, to work out practical ways and means of reconciling the conflicting interests of fish protection in the face of their proposed power development.

Many points of difference were discussed and some were clarified. I must inform you, however, that while the proposals of the city for passing fish up and down stream, as shown by the drawings, and for a broad-scale program of fish protection, provide a unique engineering approach toward solution not only of these problems on the Cowlitz River but also of future conflicts between fish and power, they are not yet in such form that the Department can state with any satisfactory degree of assurance that the problems of fish maintenance have been or will be met and solved thereby. The plans do constitute a new and novel approach. The Department cannot say that they will not work but neither can it say that they will. In its opinion, considerable further investigation, research, and design are necessary before any reasonable assurance could be given to this end.

The Department recognizes its duty to be specific in pointing out such objections or reservations as it has to the city's plans as so far developed. It questions the effectiveness of these plans as follows:

1. *As to proposed fish passage facilities.*—These facilities can be divided into those for handling (*a*) upstream migrants, (*b*) downstream migrants, and (*c*) upstream migrants during construction.

(*a*) The proposal for providing pool-type fishways at the two dams is subject to question inasmuch as successful fishways of this type have never been constructed to a height of 325 feet as proposed at Mossyrock. The alternate proposal for trapping and hauling fish is also subject to question because of known weaknesses based on past experience. It is agreed that upstream migrants can be passed over dams, but in every case to date, even on dams of lesser height, there has been a considerable loss of fish. Further experimentation may serve to furnish more positive answers on these problems.

(*b*) The proposal for handling downstream migrants as developed are unique and evidence considerable engineering ingenuity. They are based upon assumed biological laws, which may also be correct. The proposal is, however, new and untried, and there are no means, short of actual construction and trial of the devices, either in model or principle, which will permit an evaluation of their effectiveness from the standpoint of the reaction of the fish themselves.

(*c*) The problem of providing satisfactory upstream fish passage at the dams during the period of construction has been recognized but has not as yet been solved. Preliminary plans call for a tunnel bypass, and the Service is informally advised that alternate provision would be made for trapping and hauling in the event of temporary periods of heavy flow or flood. The Fish and Wildlife Service desires further plans on the passage of fish during the construction period before expressing a final conclusion.

2. *As to other features of the plan.*—(*a*) A considerable amount of salmon-spawning area (the exact amount of which will hereafter be determined by

survey) will be inundated by creation of the Mayfield and Mossyrock pools. As a possible partial offset to this, and as yet undetermined amonut of spawning area may be made available downstream from the Mayfield Dam by regulated stream flow and by desilting of the river in the reservoirs. The War Department has requested the city to maintain a minimum flow of 2,000 cubic feet per second in the river below Mayfield which, if provided, would result in greater minimum sustained flow. More data are necessary as to the stability of such regulation under system operation and as to the amount of new spawning area that will be covered before appropriate evaluation can be made of this item. The city proposes hatchery construction to replace any remaining net loss. For the reasons stated in the next paragraph, this method of replacement is questioned.

(*b*) The city's plans for hatchery construction are not yet developed to the point of determining the magnitude and acceptable location of proposed hatcheries. Some suggested sites have already been included in plans for development of the so-called lower river fisheries program, and thus in the long run would not constitute net gains. The efficiency of a salmon hatchery is dependent on the suitability of the site, and investigations so far in the area demonstrate that known good sites are already in use or scheduled for use.

(*c*) The plan as presented makes no specific mention of any measure to be undertaken to compensate for the loss through inundation of the Washington State Game Department's game-fish hatchery. The city's representatives during the conference stated that this was contemplated, however, and expressed their willingness to meet this problem.

(*d*) The general features of the city's proposed program in the nature of stream improvements, etc., are elements already included in the State and Federal cooperative lower river fisheries program and are considered an essential to maximum fish production from the Cowlitz River under existing conditions, and would thus not add up to compensation factors offsetting the effects of the dams.

As evidenced from the above, the scientists and technicians of the Fish and Wildlife Service, who have much experience in this highly complex field, are still apprehensive concerning the feasibility of the city's proposals. I am also informed by the Fish and Wildlife Service that these conclusions are concurred in by the biologists and technicians of the State of Washington. The Fish and Wildlife Service will continue to work with the engineers and biologists of the city to assist in the conducting and observing of tests and experiments to make further determinations in this regard. I reiterate that the Department's responsibilities in both the fields of fish conservation and hydroelectric development compel us to explore all possible means of reconciling what has appeared to be an outright clash of interests.

I am hopeful, however, that with the proper effort and study this problem can be solved. I should also like to add that if the Federal Power Commission should see fit to grant a license after due consideration, the Department strongly recommends the inclusion of stipulations as they relate to fish such as were set forth on page 4 of the Department's letter of October 20, 1949, to the Commission, namely:

"(1) Prior to the initiation of any project construction, the licensee shall submit to the Commission evidence of the inclusion, as an integral part of the project plans, of such modifications of project structures and operations as are considered feasible and necessary, in the interest of fish and wildlife preservation, by the Washington Department of Fisheries, the Washington Department of Game, and the United States Fish and Wildlife Service.

"(2) Subsequent to the initiation of project construction, the licensee shall construct, maintain, and operate such protective devices and shall comply with such reasonable modifications of the project structures and operation, in the interest of fish and wildlife resources, as may be hereafter prescribed by the Commission upon the recommendation of the Secretary of the Interior."

Sincerely yours,

OSCAR L. CHAPMAN,
Secretary of the Interior.

Mr. ANGELL. For the record does Tacoma get power from Bonneville?

Mr. ELY. Yes. It gets some power there.

Mr. ANGELL. What percentage of its power does it get from Bonneville?

Mr. ELY. I do not have that, but I will try to obtain it for the record.

Mr. ANGELL. A substantial amount?

Mr. ELY. Yes.

Mr. ANGELL. So it would be interested in having this power firmed up for its own supply?

Mr. ELY. Yes, sir, and, as I stated, if Cowlitz goes in, our power goes into a general pool so the entire Northwest shares in its benefits.

Mr. ANGELL. The city of Tacoma would perhaps need all the power developed at Cowlitz, and there would be no excess?

Mr. ELY. We would have excess for a period of time during which other Federal hydro projects, presumably, or local municipal projects, would be completed on the Columbia River and its tributaries, and each take a share of the load.

Mr. WATTS. You said, Mr. Ely, that the total output of this would be around 460,000 kilowatts?

Mr. ELY. That would be installed capacity.

Mr. WATTS. And due to slackening of rainfall it might go down as low as 400,000 at certain times of the year?

Mr. ELY. Yes, sir; in certain years of low runoff.

Mr. WATTS. In other years you would have 460,000?

Mr. ELY. In other years.

Mr. WATTS. Would you as a representative of Tacoma Power Co. think it advisable for Tacoma Power Co. to install steam facilities to augment that power to hold it to the 460,000?

Mr. ELY. We—that is, the city of Tacoma's municipal system—do have, as I say, about a 10-percent reserve of steam capacity, and that capacity would be increased over the years to about maintain the ratio, I assume, as new hydro went in. So that you are quite correct that in the course of time, as more hydro went in, including the Cowlitz, we would probably offset it in some degree, in a minor percentage, 10 percent we would say, of steam capacity.

Mr. WATTS. Do you have any figures to show or do you know whether or not the proposed steam generating plants in this bill are more than enough to firm up the power that is produced by the hydro plants that they seek to augment, or is it somewhere in the bounds of reason as to the amount that would be needed for that purpose?

Mr. ELY. Again we get to such a difficult question of definitions.

Mr. WATTS. I realize that. Does it appear or do you have any figures that would lead you to believe that this is an effort to augment the over-all power situation, or is it merely an effort to firm up what power is being produced?

Mr. ELY. The answer to that, sir, depends upon the time to which you direct the answer to the question. The load in the Pacific Northwest rose so rapidly in the past that what is true of 1 year as to the relative needs for steam and hydro may be completely wrong if you are speaking of a year or three years or four or five in the future. But as to the problem immediately before you, the question is, Shall you install 400,000 kilowatts of steam capacity to meet an existing shortage?

The steam, if you were to put it in right now, would not stand there as emergency stand-by reserve at all. It would be put into use just as we would use the Cowlitz, as a project for grinding out all the

kilowatt-hours you could get out of it. To equal Cowlitz, 1,400,000 kilowatt-hours, it would burn fuel.

Mr. WATTS. There would be times when water flow was at its highest point that you would have power in excess of what you would normally have? Is that right?

Mr. ELY. Yes. If I understand the point we are both reaching for, it is perfectly feasible to install hydro capacity upon the Columbia River and its tributaries which will be adequate even in years of low flow to meet all the demand. As Dr. Raver indicated yesterday, there is hydro capacity capable of development in that great area of 40 or 50 million kilowatts.

Consequently, given time, you could have a hydro system which was integrated with steam only to the degree you had to have steam to meet breakdowns or emergencies, not to meet low-water years.

Right now the steam-plant program that is before you is not of that character at all. It is an emergency plant to grind out kilowatt-hours for an existing power shortage that is on us, by burning fuel equal to 2,500,000 barrels of oil yearly to replace Cowlitz wasted hydro energy.

Mr. WATTS. The point I was trying to make is this: Take a hydroelectric dam that we will say 9 months out of the year produces 500,000 kilowatts, and there are 3 months of dry weather. I live in a section in Kentucky where 9 months of the year our streams flow freely, and the other 3 months they more or less dry up. Now, if this hydroelectric dam is capable of producing 500,000 kilowatts of power during the 9-month period. I am just wondering if it would be good business, if during the 3 months it only produced 400,000, to have a supplemental plant there to augment that power so that you would get your continuous flow of 500,000.

I wondered if this bill was aimed at doing that or was it the intention of this bill to provide more than enough current to firm up the top amount of current that is being produced by the hydroelectric plants.

Mr. ELY. I think the latter, in general. What you are describing is a run-of-the-river plant where you have water for 9 months and you do not have for 3. You have to carry yourself during that 3-month period either by storage dams that equate the flow of the river, which is what we would do—one of our dams on the Cowlitz has a very large capacity—or, if you cannot put in storage capacity, by supplying the deficiency by steam or some other energy source.

Mr. JACKSON. Mr. Chairman, I believe I am in probably a better position than Mr. Ely to determine what the intent of this bill is. I might call to the committee's attention the fact that I introduced this bill prior to the power shortage. The record will disclose that I introduced the bill on July 26.

Mr. DONDERO. This year?

Mr. JACKSON. That is right. There was no power shortage at that time. This summer at the time I introduced the bill I made it clear it was for the purpose of firming up as well as taking care of the emergency needs.

Now, to answer Mr. Watts's question specifically as to whether this is a power-generating facility separate and apart from firming up. I have Mr. Schultz here who is, I think, better qualified to answer that question. He is chief engineer for Bonneville and could answer your question specifically.

Mr. ELY. Before I leave the witness stand, on this question of timing I recall yesterday Dr. Raver said they began to plan the steam plants a year ago when they knew the shortage was coming. That happens to be about the date when the Secretary of Interior wrote his letter of May 1, 1950, to the Federal Power Commission that put the road block in the way of this Cowlitz project. Everybody knew a shortage was going to come. I think Dr. Raver's forehandedness is to be commended, in trying to meet it. What I object to is the same Department getting in our way in attempting to meet that shortage by a hydro system at our own expense.

Mr. JACKSON. If there is a road block in on the Cowlitz, I think you know who put it in. It was the Washington State Legislature. Everyone out there understands that. And it was not a political problem. After all, the State administration is Republican, and the legislature at the time this was passed, I believe, was half and half. I am not sure. But it was not a political question.

I just want to make the record clear. If there is a road block, it was the Washington State Legislature when they voted in the senate, all but one member of the senate voting in favor of setting it up as a fish sanctuary. I do not see how you can say that the Department of the Interior is responsible for it.

Mr. ELY. I think the Secretary's letter plus the testimony of his experts will have to speak for itself on that.

Mr. JACKSON. As the Secretary explained, that letter that he sent was after the legislature acted. He felt that he should not interfere in the wishes of the State of Washington as expressed by the legislature. That is what he testified to yesterday.

Mr. ELY. The letter does not say a word about the local views of the State of Washington. He speaks out on his own. He is putting forth the views of the Interior Department, not the State of Washington.

Mr. JACKSON. Were you here yesterday, Mr. Ely? Did he not state why?

Mr. ELY. Yes; he did, but it is not in his letter.

Mr. LARCADE. The gentleman from Arkansas desires to ask you a question.

Mr. TRIMBLE. Mr. Ely, I have regained my strength long enough to ask one question. It appears that, able advocate that you are, what you are in effect asking this committee to do is to appear in substance as amicus curiae to the Federal Power Commission to hold this bill off until you get your dam.

Mr. ELY. No. I am glad to have a chance to clarify that. We say (1) if the Federal Power Commission issues a license we will build at once, install ultimately 460,000 kilowatts; (2) if the Power Commission issues the license, then you have a far different question before you as to the quantity of steam capacity, if any, to authorize now; (3) the road block in the way of issuance of a license by the Federal Power Commission is primarily the viewpont of the Department of the Interior; and (4), if this committee does take any action one way or the other with respect to the steam-plant program, we think you might very well properly ask the Secretary of the Interior as a Federal official to withdraw the objections he has placed before the Federal Commission; and (5) neither Mr. Erdahl nor I want to be characterized as opponents of the installation of steam-plant capacity in

the Northwest to the extent that it may be required if added to the Cowlitz capacity.

Mr. TRIMBLE. That is all.

Mr. LARCADE. Thank you.

The next witness is Mr. P. C. Spowart, assistant superintendent of the Department of Lighting of the City of Seattle, Wash.

Mr. JACKSON. Mr. Chairman, I wonder if Mr. Schultz could answer Mr. Watts' question, just that one point that I think is confusing in the record?

Mr. LARCADE. If you desire Mr. Schultz to make a short statement, he may do so. You may give your name and official capacity to the reporter.

STATEMENT OF S. E. SCHULTZ, CHIEF ENGINEER, BONNEVILLE POWER ADMINISTRATION

Mr. SCHULTZ. I think the question asked was whether the steam plants were to be used as a base-load generation to the Pacific Northwest. I may say that these steam plants, there fuel-fired plants, are intended as a means of firming up the hydroelectric power, the secondary power, that is available in the Northwest. They are not intended as a substitute or as a means for displacing any hydro on a base-load basis.

Now, certainly they are not intended as a substitute for the Cowlitz development. The Federal Power Commission engineers, I am sure, agree with me that we could use the Cowlitz and the steam plants in the Pacific Northwest. As a matter of fact, they are quite emphatic in their statements about the need for a limited amount of steam capacity in the Northwest, and I think 400,000 kilowatts is the figure.

Mr. LARCADE. Thank you, Mr. Schultz.

Mr. SCHULTZ. Does that answer the question?

Mr. LARCADE. Do the gentlemen on my right have any questions?

Mr. ANGELL. Mr. Schultz comes from my State. He is a very fine official of Bonneville. He has a very efficient operation at Bonneville. I would like to ask this question along the line answered previously. That is, by the time these two plants could be built, and the steam plants, there would still be need for additional power in the area?

Mr. SCHULTZ. That is correct, sir.

Mr. LARCADE. Are there any further questions by any members of the committee?

Thank you very much, Mr. Schultz.

The next witness is Mr. P. C. Spowart, assistant superintendent of the Department of Lighting of the City of Seattle, Wash.

STATEMENT OF P. C. SPOWART, ASSISTANT SUPERINTENDENT, DEPARTMENT OF LIGHTING, SEATTLE, WASH.

Mr. SPOWART. Mr. Chairman and gentlemen of the committee, I have prepared a statement regarding the steam-plant bill, and wish to file same. Yesterday some of the Congressmen showed keen interest in what other utilities in the area were doing to take care of their own resources, and if you will allow me, I would like to make a few

comments about what we have done and what is contained in our statement.

Seattle City Light is one of the oldest and the second largest municipally owned power system in the United States. We have always believed in the policy of self-help. For more than 30 years we have been able to supply our own electrical requirements. We had hoped again that we would be independent; but, due to the rapid growth of the area and the defense demands, we are in doubt as to whether we will ever be independent again.

In 1949 Seattle completed Ross Dam on the Skagit River, the fifth highest dam in the United States. In June of this year an additional unit to the city's Gorge plant on the Skagit River was completed, providing approximately 59,000 horsepower of additional capacity. Construction is being rushed on the Ross power plant, and it is scheduled for completion with three generators in 1953, providing 361,000 horsepower. These facilities, along with required transmission facilities, represent an investment of over $100,000,000 by the city of Seattle in an effort to provide sufficient power and energy to meet the requirements of its customers. The city has steam-powered electric-generating equipment with a capacity of 81,000 horsepower.

While the city of Seattle within a few years will have about 870,000 horsepower of generating capacity, it appears that it will always purchase some of its required power supply from the United States Government plants on the Columbia River.

It is believed that the committee is well informed on the seriousness of the power shortage which faces the western group of the Northwest power pool for at least the next 4 to 5 years.

The main purpose of the bill before the committee is to authorize the construction of fuel-fired generating plants in the area to help alleviate this shortage which is a serious threat to defense production. The city of Seattle, as an operator of a public utility in the area, has requested me to appear before your committee in support of the authorization of the construction of such fuel-fired plants.

If these plants can be built sooner than any new starts of hydroplants, they can be of great value in the production of power for defense industries. Furthermore, even though the power shortage may ease, these plants will have a very material value in firming up the hydroelectric resources of the Government's hydropower generating on the Columbia River during critical water conditions.

The city of Seattle wishes to go on record in support of the construction of these steam plants without surrendering any new starts on our rivers by any public agency.

There is one phase of this bill, however, of which we do not approve. This objectionable feature is contained in subsection (d) of section 14 and is related to the fixing of rates by the Secretary of Interior without further confirmation or approval. We are of the firm opinion that rates which may be prescribed by the Administrator or the Secretary of Interior should continue to be subject to confirmation and approval by the Federal Power Commission, as provided for in section 6 of the Bonneville Act.

It would appear from legislation that has preceded this bill that it has been the intention of the Congress to continue the policy of making the rates proposed for the sale of Federal power subject to the ap-

proval of the Federal Power Commission. Designation of the Federal Power Commission as the agency to provide final approval of rates would appear to be in keeping with the provisions of the Federal Power Act, and the important thing is that it would allow interested parties an opportunity to present their opinions concerning such rates to the Commission.

It is not that we distrust the Bonneville Administrator or the Secretary of the Interior Department, but we are apprehensive. We fear that some persons later to occupy these offices may make rates that the people of the Northwest would find unjust. Democracy is founded on checks and balances. The present law provides for hearings and a check on the rates. We respectfully urge that the law should not be changed; that the last sentence of section 14(d), which reads as follows, be stricken from H. R. 4963:

> Rates fixed by the Secretary pursuant to this subsection or for power to be disposed of pursuant to subsection (b) of this section shall become effective without further confirmation or approval.

Thank you.

Mr. LARCADE. Thank you very much.

Are there any questions by the gentleman from Minnesota?

Mr. BLATNIK. No questions.

Mr. LARCADE. The gentleman from Michigan?

Mr. DONDERO. No questions.

Mr. LARCADE. The gentleman from Kentucky?

Mr. WATTS. No questions.

Mr. LARCADE. The gentleman from Oregon?

Mr. ANGELL. No questions.

Mr. LARCADE. The gentleman from Washington?

Mr. MACK. Just one question. Earlier today a statement was made from Mr. J. Frank Ward, president, American Public Power Association. Is your organization a member of that association?

Mr. SPOWART. Yes, sir.

Mr. MACK. In that statement, I understood Mr. Ward as saying that the association, which represents 700 local publicly owned utilities, was in favor of building the Cowlitz dams ahead of the steam plants. The organization itself has taken no position on that matter; has it?

Mr. SPOWART. Our organization has no objections to the Cowlitz project being built. The way we feel about the power situation in the Northwest is that there is room for the construction of hydro and the necessity of steam to firm up that hydro, which is the case in practically every utility in the United States. We have no objections to what is being built; and, as a matter of fact, we would like to see as much construction as possible under the circumstances.

Mr. MACK. Well, Mr. Ward's position was purely that the Cowlitz dams should be built first and the steam plants afterward. He had no authority to speak for the organization in that respect; did he?

Mr. SPOWART. I would state that our organization would have no objections to the Cowlitz being built.

Mr. MACK. But you have not taken the position that the Cowlitz dams should be built first and that the construction of the steam plants should be delayed until after the Cowlitz dams are completed? There has been no consultation between your organization members and Mr. Ward that authorizes him to say that the Cowlitz dams should be built first and the steam plants afterward?

Mr. SPOWART. The Northwest Public Power Association, of which we are a member, and the Northwest Conference Committee, of which we are also a member, composed of both public and private agencies, are in accord with the possibilities of the Cowlitz project being completed.

Mr. MACK. That is all.

Mr. LARCADE. The gentleman from Kansas, Mr. George.

Mr. GEORGE. No questions.

Mr. LARCADE. Thank you very much.

It has been suggested to the committee that perhaps Mr. Paul Raver, of the Bonneville Power Administration, would like to comment very briefly with respect to the references that have been made to this subject. Is Mr. Raver present?

Would you have any further observations to make briefly with respect to the testimony that has been submitted?

STATEMENT OF PAUL J. RAVER, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION

Mr. RAVER. I appreciate your giving me an opportunity just to make this observation. The legislation which is before you is authorization legislation. It is true it contains a definite provision for a certain amount of steam installation. But, from the point of view of the emergency, certainly Mr. Wilson and his organization are going to determine whether or not generating capacity is available for the Cowlitz or the steam plants or anything else in the Northwest.

It seems to me that the flexibility needed in this particular situation is aided by having an authorization under which he at least can act any way he sees fit in this emergency, whereas, if the authorization is not made, he cannot move expeditiously on steam in the Northwest if he wants to put some generators in there.

I do not believe that point has been made. At least I have not heard it in all of this discussion.

I want to make it clear again, as I stated yesterday, that we are not opposed to the Cowlitz. As a matter of fact, I have publicly stated and have done everything that I could in my position to aid in getting the Cowlitz Dam started. I do not believe that these two matters are in conflict from an emergency point of view. Certainly they are not in conflict from a long-time point of wiew, as has been agreed and stated.

But, from an emergency point of view, what this legislation does—if this committee feels inclined to approve it—is to make the handling of the emergency situation more flexible, so that the Defense Production Administration can move as it sees fit either for one steam plant or for two or more steam plants or for no steam plants, depending upon what they think ought to be done.

I do not believe that that point, Mr. Chairman, has been made. Thus far, at least, I have not heard it made.

Thank you.

Mr. LARCADE. Thank you very much.

Mr. ANGELL. Mr. Chairman, may I ask Dr. Raver one question?

Mr. LARCADE. The gentleman from Oregon.

Mr. ANGELL. The primary purpose of this legislation—is it not, Dr. Raver—is to firm up hydroelectric power in the system you operate?

Mr. RAVER. That is correct.

Mr. ANGELL. In the long-range program?

Mr. RAVER. That is right.

Mr. DONDERO. Mr. Raver, how do you square your last statement with the fact that if the Cowlitz project was brought in it would come in sooner than you could build the steam plant and the further fact that for three long years that project has been delayed?

Mr. RAVER. How do I——

Mr. DONDERO. You come here and say this bill is based upon an emergency, when another witness says it is simply to firm up power for future use. On which peg do we stand?

Mr. RAVER. Firming up the power happens to be an emergency situation also at the present time. The aluminum plants that are being shut down in the Northwest are plants that are operating on interruptible power. We have shut down no firm-power plants as yet. If we had steam at the present time, we would not be shutting them down.

Mr. DONDERO. Then why not come in with legislation if necessary to build the Cowlitz plant, which can be done sooner than you can build the steam plant?

Mr. RAVER. That does not happen to be a legislative matter that can come before this Congress.

Mr. DONDERO. That is right. It is within your own Administration, as I understand.

Mr. RAVER. No; it is not. It has nothing to do with the Bonneville problem. It is a local problem, and I am representing only the Federal Government here.

Mr. MACK. That matter is before the Federal Power Commission, not before the committee, is it not?

Mr. RAVER. That is correct.

Mr. DONDERO. That is all the more reason why the other statement seems to bear great merit and force. They have been waiting three long years.

Mr. RAVER. I am entirely in favor of having the Cowlitz go ahead.

Mr. GEORGE. Would this problem have been before us now if they had not tied that Cowlitz Dam up?

Mr. RAVER. It might not. I am not sure whether it would or not. It depends on whether steam is needed anyway. I think it is. It might not be 400,000 kilowatts of steam. The whole question there is working out the economics of this thing and being able to work it out by having the kind of legislation we have asked for here so that we can move jointly. This was a joint problem facing us in the Northwest—the Federal Government working with these local agencies.

This proposal is not, from my point of view, at least, in any respect a proposal to stop any public agency or private agency from adding to the generating capacity of that region.

Mr. GEORGE. Steam power is always a more firm power, is it not, than water as a rule?

Mr. RAVER. Steam power is firm power, assuming you have fuel to run it. But we have no intention, as our chief engineer pointed out, to use steam capacity for firm-power purposes unless it is essential as an emergency to do it. We use it for firming up our hydro. And on that basis, as I pointed out yesterday, the economic breaking point is 400,000 kilowatts. One steam plant is more economical than four. One hundred thousand kilowatts is more economical than

400,000 from a point of view of dollars and cents. And as you rise up to 400,000, you have about reached the economic limit under present conditions, at least for using steam in connection with hydro.

Now, that has nothing to do with firm-power continuous use of steam at all. It has entirely an economic place in using the steam in connection with hydro.

Mr. DONDERO. Dr. Raver, the very agency that wants this bill, the Department of the Interior, is the very agency that has opposed, at least up to this hour, all the development in the Cowlitz River. That is what we are presented with.

Mr. RAVER. I am not here to argue that point with you, sir. I think the record speaks for itself on that. I cannot agree with you, but I am not here to argue with you.

Mr. DONDERO. Well, that is what the record shows anyway.

Mr. LARCADE. Are there any further questions by the gentlemen on the right?

Any further questions by the gentlemen on the left?

Thank you very much, Mr. Raver.

Mr. MACK. I ask unanimous consent to include in the record several telegrams from public utility districts of my area expressing their support of this legislation.

Mr. LARCADE. Without objection, it is so ordered.

(The telegrams referred to are printed on pp. 225–226.)

Mr. LARCADE. I would like with permission of the committee, without objection, to file for the record various telegrams and letters and statements both for and against this project.

I would like to file for the protection of the chairman of this committee, in addition to the public notices that have been given with respect to the holding of the hearings on H. R. 4963, a copy of a telegram which was signed by the chairman of this committee and sent to various interested parties in the States of Washington, Oregon, Idaho, and other States.

I would also like to file for the record a telegram from Edgar W. Smith, president, Portland Chamber of Commerce, of Portland, Oreg.; a telegram from Gov. Douglas McKay, of the State of Oregon; a letter from the Chamber of Commrce of the United States signed by D. J. Guy, manager of the natural resources department; a letter from the city of Seattle signed by E. R. Hoffman, superintendent of lighting; a letter by James R. Shick, attorney, of Forest Grove, Oreg.; a letter by Roy W. Atkinson, regional director, State of Washington, Congress of Industrial Organizations; a letter from the Kiwanis Club of Cle Elum, Wash., signed by Everett Stumpf, president; and a letter by the Washington State Grange signed by Henry P. Carstensen.

(The letters and telegrams referred to are included on pp. 228–234.)

Mr. LARCADE. Without objection, I ask now unanimous consent that any other interested persons either for or against this project may be authorized to file statements in the record up to Monday evening at 6 o'clock.

Without objection, so ordered.

There being no further business, we will adjourn until Monday morning at 10 a. m. to resume the hearings on H. R. 4936.

(Thereupon, at 1:10 p. m., the committee was adjourned, to reconvene at 10 a. m., Monday, October 1, 1951.)

STEAM ELECTRIC GENERATING PLANTS IN PACIFIC NORTHWEST

MONDAY, OCTOBER 1, 1951

HOUSE OF REPRESENTATIVES,
COMMITTEE ON PUBLIC WORKS,
Washington, D. C.

The committee met, pursuant to notice, at 10:07 a. m., Hon. Henry D. Larcade, Jr., presiding.

Mr. LARCADE. The meeting will come to order for the further consideration of H. R. 4963 by the gentleman from Washington, Mr. Jackson.

At this time the Chair recognizes Mr. Jackson.

Mr. JACKSON. Mr. Chairman, Mr. Hatfield was to be here this morning to present a letter. However, he is in New York and his plane was delayed, so I wonder if we could have the letter included at this point. It is a letter from the Defense Department.

Mr. LARCADE. Do you expect him to be here later?

Mr. JACKSON. There is some question as to whether he will be able to be here. They told me that his plane was delayed. The letter is signed by the Assistant Secretary of Defense, Daniel K. Edwards.

Mr. LARCADE. Without objection, the letter will be filed in the record, and if Mr. Hatfield desires to make a further statement the committee will be glad to have him do so.

Mr. JACKSON. Fine. Thank you, sir.

(The letter from Daniel K. Edwards, Assistant Secretary of Defense, is as follows:)

ASSISTANT SECRETARY OF DEFENSE,
Washington 25, D. C., September 29, 1951.

Hon. CHARLES A. BUCKLEY,
Chairman, Committee on Public Works,
House of Representatives.

DEAR MR. CHAIRMAN: Reference is made to your request for the views of the Department of Defense on H. R. 4963, a bill, to authorize the construction, operation, and maintenance of certain fuel-fired electric generating plants in order to make it possible for the Department of the Interior to meet certain defense power requirements in the Pacific Northwest, and for other purposes.

H. R. 4963 would authorize the construction, operation, and maintenance of eight fuel-fired electric generating plants with which the Department of the Interior could augment power output in the Pacific Northwest.

The Department of Defense fully recognizes the importance of establishing and maintaining adequate power facilities in the Northwest and is in constant touch with the Department of the Interior in developing and working out solutions to the power problems in that area.

We are informed that the Department of the Interior has given some consideration to problems of fuel supply and manufacturer's schedules which would be involved in building these plants at this time as well as other potential sources of electric energy in the Pacific Northwest. While we are not now in a position to evaluate the conflicts which might be involved between demands for fuel and

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demands for electric energy in the Pacific Northwest at such times as the plants might be built, we understand that the Department of the Interior will be working with the Department of Defense and other defense agencies in exploring these matters as plans for the steam plants develop, and Congress will have an opportunity to review these problems in connection with such action as may be taken with respect to any request for appropriations for construction of the plants. In the meantime, this authorization will provide the degree of flexibility needed in the planning of defense power needs.

The Department of Defense has no objection to the enactment of this legislation, and at the invitation of the committee will provide a witness to more fully explore this legislation for the information of the committee.

The Bureau of the Budget has been consulted and advises that there is no objection to the submission of this report.

Sincerely,

DANIEL K. EDWARDS.

Mr. LARCADE. I see we have two Members of Congress here present from Arkansas, Mr. Tackett and Mr. Harris. Ordinarily it is customary for Members of Congress to be heard first because they have so many duties to perform here. At this time, if the gentleman from Arkansas, Mr. Harris, would like to appear before the committee, we would be glad to hear from him.

STATEMENT OF HON. OREN HARRIS, A MEMBER OF CONGRESS FROM THE SEVENTH CONGRESSIONAL DISTRICT OF ARKANSAS

Mr. HARRIS. Mr. Chairman and members of the committee. I appreciate the opportunity afforded me this morning to come before your committee and make a brief statement to you with reference to the bill under consideration which, as I understand, would authorize the construction, operation, and maintenance of certain fuel-fired steam generating plants to make it possible for the Department of the Interior to meet certain defense power requirements in the Pacific Northwest.

Mr. Chairman, I am always reluctant to appear before a committee or to make any statement regarding a program, in any other section of the country indicating that there might be controversy between it and the development of my own area. It has never been my feeling and position, or my attitude toward any section of this great country of ours, to interject sectional differences.

We are a great country because when we need to get a job done we have gone about it in a united effort and in such manner that the final results will accomplish a successful undertaking in the interest of all the people of America. However, I do feel that perhaps some of us in certain sections of our country have been somewhat derelict in calling to the attention of appropriate sources, or at least in emphasizing, what seems to me to be a most practical problem in the interest of our people, even though there might be some controversies developed which could be considered to be on a sectional basis.

I do hope, Mr. Chairman, that you will listen to me this morning on the basis of my best intention to bring to you this matter which I think means a lot to all of the people in the entire country.

The question of providing stand-by steam generating capacity in the Pacific Northwest has arisen principally due to governmental action. That action is in consideration of our defense mobilization program.

Let me say here, Mr. Chairman, that I believe every member of this committee will agree with me that it is a real tragedy that our country demobilized, disposed of, and destroyed so much equipment and matériel following World War II and therefore find ourselves in a weakened position when world conditions are such as we know they are today.

This makes it imperative that we start from scratch or, you might say, from the ground up. In doing so, one of the vital metals necessary in this mobilization program is aluminum.

I had the experience of being on a plane some year and a half ago returning to Washington and happened to be talking with a gentleman in industry who knew a lot about the aluminum situation. That was before the mobilization program even got under way. He told me that the industry realized the expansion of aluminum in this country was imperative and that it is going to get tighter and tighter and that something is going to have to be done about it.

It was only a matter of a few months after that until the Korean war started. The world situation began to become more tense, and we found it necessary for us to act. This brought about the Defense Production Act of 1950, which became law in September. Following that, among the expansions in our industrial progress, certainly aluminum and the aluminum industry became a part of it. Therefore, the Government undertakes to increase the aluminum production which is necessary, and they start trying to formulate plans and policies as to what to do about it.

It was the latter part of the year that I got in on the picture and started some conversations and discussions myself. That went on up until March and even on up until the summer.

The reason you have this bill here before you today is because certain agencies are endeavoring, taking advantage of the defense program, to increase the power productivity to bring about bigger loads and further expansion and further progress in a particular section of the country when many of us believe that it would be more appropriate in the interest of the United States and our mobilization program in many ways for this development to be in another part of the country.

As I say, I do not like to appear here in opposition to colleagues of mine who are interested in their own areas. We are all interested in our areas, of course, but I have a little background story which I want to give you which I should think would interest you.

The aluminum industry has developed out there in Pacific Northwest and has done a very good job. It has developed in our own State during World War II. There have been additional pot lines recently, and there have been additional expansions of the aluminum industry in other parts of the Southwest and in the South.

Now, when additional expansion came up, consideration was being given as to what should be done. I talked to some of the companies about it myself. They told me what they would prefer. In our conversation they gave me what they believed would be the best procedure in the interest of the whole program.

They were concerned about having to go out into an area where there was only hydro power, which is apparently committed, not only existing power but on those projects that are to come into being at a later time.

So these companies were interested in the Southwest—not particularly in our State alone but in the entire area. Why? Because, in the first place, we have approximately 95 percent of all the bauxite ore in the United States. A number of the companies are interested in the undeveloped reserves that we have there.

Another reason is that we are in an area where power, which is absolutely essential in the production of aluminum, can be made and produced and expanded more cheaply if it is to be fuel power than perhaps in any other place in the United States. If there is any available reserve of power, it is in our area.

The power pooled together in your State, in mine, in Oklahoma, Texas, Louisiana, Mississippi, and the entire Southwest—this great power pool is sending 100,000 kilowatts of power to the Tennessee Valley area.

I am not complaining about the Tennessee Valley area being developed. If it is needed in the interests of or national defense, yes. But you hear the hue and cry throughout all the country that there is a shortage of power.

Mr. VURSELL. Mr. Chairman, will the gentleman yield on that point for a question?

Mr. HARRIS. I will be glad to.

Mr. VURSELL. From whence comes this power that you furnish to TVA? Is that power from private companies?

Mr. HARRIS. From private companies. Yes.

Mr. VURSELL. Well, would there be an objection to using or locating this where you could have private companies do it? It seems as though the idea is to get the Government into this power thing all the time. Of course, I do not go along with that idea.

Mr. HARRIS. There is the public versus the private power philosophy, but I think this issue is so important because it is based on our national defense program in that all available power, whether it is private or public, should be utilized, and utilized in the area where the most effective results could be obtained.

Mr. VURSELL. I am rather persuaded by your argument thus far, and it would seem to me that, from the standpoint of protection from a foreign foe, power plants built up in the central Mississippi Valley would be less exposed than those in the far West and on the seaboard.

Mr. HARRIS. Well, that is another problem, to be sure. I am not in a position to say what locality in the country might be most secure in comparison with another locality. In other words, I am not able to say that the hydrogen bomb project should have gone to South Carolina. I assume the people who made the decision knew what they were doing. We have to depend on those people who make decisions on such highly important projects in the interest of our own security.

I am talking about what has developed as a result of a directive of a Government agency. My section is vitally affected by it. We are not complaining because we have not gotten any defense plants during this mobilization period, you might say.

Mr. VURSELL. Do you have much coal? How about your coal production?

Mr. HARRIS. We have coal which can be produced just about as cheaply as anywhere in the United States. We have gas, which is

cheaper than any other fuel you can get for the purpose of operating so-called stand-by or steam generating plants. We produce gas in our own State of Arkansas, and additional discoveries are being made all the time. We have it in my own area in south Arkansas, in north Louisiana, and there are almost unlimited quantities in Texas and in your area in Mississippi, Mr. Smith.

Mr. SMITH. Will the gentleman yield for a minute there?

Mr. HARRIS. I would like to tell you there is a great potentiality for the development of one of the biggest gas fields we know anything about in your own State.

Mr. SMITH. In reference to the gas power generation in our area, we are unable in my particular part of the State to get any gas. I wonder of what point would it be to get any industrialization in there if the gas companies are more interested in supplying areas up in the East with their pipelines than they are in supplying it in my particular part of Mississippi.

Mr. HARRIS. There has been a lot of development in the movement of gas to other sections of the country.

Mr. SMITH. It all moves through my district, but we cannot get any of it stopped there.

Mr. HARRIS. That is a problem, and many of us in the Southwest have been watching that situation develop and have been doing something about it.

Mr. SMITH. There is a shortage of power.

Mr. HARRIS. I will say this: The Federal Power Commission has already issued an order that they are not going to permit further expansion of the industtrial uses of gas in other areas of the country. A limitation has been put on that already. That is principally because of the transportation available for gas.

However, what I was trying to get to was to advise you of some of my activities, Mr. Chairman.

I took this matter up following a letter I had from the Arkansas Resources and Development Commission, of our State, the first part of this year, in which that commission was coming to us for assistance regarding the defense mobilization program with whatever project might be appropriate in our part of the country. I had talked to some of the aluminum industry men. They had told me they were very much interested in coming into my State, Louisiana, and Texas because of various elements. One was the bauxite supply in my State.

Mr. DONDERO. Connect that with aluminum.

Mr. HARRIS. You mean the location?

Mr. DONDERO. Yes. You mention bauxite alone without connecting it with the aluminum industry. Why do you mention bauxite?

Mr. HARRIS. Bauxite is the ore.

Mr. DONDERO. I know that.

Mr. HARRIS. And from the ore alumina is produced. Alumina is transposed into pig aluminum, from which it is rolled into the sheet and other forms of aluminum for use in civilian and military programs. We get a substantial supply of our ore in this country from South America.

When this ore was developed in our State, it was found out that many, many years of supply are available. Consequently the aluminum companies have been very much interested in it.

Two things are necessary in connection with this program, as you know. One is the ore itself, and the other is the availability of power. Recently the Aluminum Co. of America went down into Texas. They have an expansion plant under way there. They went into the area where lignite or gas could be made available to them more cheaply and in large quantities, and consequently they absorbed the transportation cost of the alumina from the bauxite mines. Then in another expansion program, one of the companies went to the Pacific Northwest.

The important thing about this was that I had told people down our way that after some investigation it seemed the gas and electric power that they thought they should have at a price was not available. That brought about quite a sharp controversy and some consideration of the whole problem.

I discussed it with the Secretary of the Interior Mr. Chapman. About the same time an order came out from Mr. Chapman in which he announced a policy to assure maximum use of available power. That was released on March 1, 1951. That policy was taken by some of the companies to mean that it was a directive by Mr. Chapman for such expanded aluminum industries to go to the Pacific Northwest, which is an area that would certainly be, if all reports are correct, easy to reach by a possible enemy that we might have. We are all familiar with that.

However, aside from that, you have the long transportation haul, wherever it might come from, even if it is from my own State in our Southwest area, or from South America. From there it has to be shipped clear across the country to some other location in order to have further processing.

Therefore I asked Mr. Chapman about this policy, and he told me it is not intended in any way to be discriminatory against one section or the other. I said, "Why do you have to say then that this expansion of industry has to go to the Pacific Northwest, even though you say in the same announcement that there might be some interruptions because the power is not available at the moment? You are talking about developing defense industries in an area where you admit that there will be interruptions probably for 2 or 3 years or more. Yet by your directive you send these industries to that area, and now they have run into a drought, which is to be regretted, to be sure, and an acute situation has arisen, which in my opinion is contributed to by what these companies took as a directive."

Gentlemen, I should like to say to this committee that in my opinion one of the things about this huge defense program we have is that probably some of the apparent arbitrary decisions on the locations of industry cost the taxpayers of this country millions upon millions of dollars. I asked one of the companies about where it would prefer to go. I mean, from the economic side of it. They said it was either in my own State, for this expansion of industry, because of the fuel availability, or else it was in your State, Mr. Chairman, within the vicinity of New Orleans. I know a study was made of both areas.

Mr. VURSELL. Do I understand this bauxite, or whatever ore is necessary, is not mined in great quantities in the Northwest area, but would have to be shipped there?

Mr. HARRIS. If there is any bauxite ore in the Northwest anywhere, I do not know about it.

Mr. VURSELL. Then it would seem the reason they want to put them out there is because they could develop cheaper power out there because of the hydroelectric power. I assume that would be the reason.

Mr. HARRIS. The companies tell me that in order to produce aluminum at the cost that the Government requires them to—that is, at about present prices, which I believe is about 19 cents—they have to have power at around 3 mills or a little more.

Now, the expansion program that went to Texas, as I understand it, is costing about 3.3 or maybe 3.7. As I understand it, they are able to get a contract in the Pacific Northwest for what power is available from hydro at about 2½ mills.

Mr. MACK. A little less than 2½ mills. It is 2.37 mills.

Mr. HARRIS. Everyone who is familiar with it—and I am not an engineer, and I do not claim to know too much about it—knows that hydro power cannot be used in full production on the peaking level all the time. Now, when you must have stand-by or steam power, then compare the cost of the fuel in the area where it is produced with the cost of the fuel that is available in other parts of the United States.

What I am talking to you about now is the apparent action that was taken in the adoption of a policy which was announced back in the first part of this year, which has caused companies, in my opinion, to go to a certain area which they do not believe is as economical as if they would have been permitted to go to some other area. Consequently I bring it to the attention of this committee because my area is involved here, and I do not want to sit by any longer and watch certain inadequacies in a program like this being developed, thereby not only affecting my area but the whole United States.

Mr. VURSELL. It would seem to me that when you have the power and the fuel located in the center of the United States it is better from a defense standpoint to locate it there. Then, also, you have the Mississippi and the water transportation available there to bring the ore to the proper place, and that could be used as an offsetting factor in the long run, as well as knowing you would have this power and not have to depend on this hydroelectric power, whereby you would have to build the stand-by plants. Then I think in the long run you would be able to produce the end product at less cost, or at least equal cost to that which is produced by the power in the Northwest.

Mr. HARRIS. In the policy statement that was issued on March 1, there were certain statements made, and I would like to read you two paragraphs from it. It seems to me it is a very short-sighted policy because when a Government agency which is in a position to direct the operations of some of the most vital industrial development does so on anything except the most practical and economical basis—a basis which would be in the interest of all the people—it seems to me it is a very short-sighted policy.

Mr. Chapman says:

> Industries should be located in those areas where the power potential will increase during the next few years, even though it may be necessary for a short interval of time to serve such industries on an interruptible basis.

Here we are going into a mobilization program where we must mobilize now, everyone says. One of the things that is highly important in our mobilization program is the production of aluminum.

Then you have the situation where someone who has the authority, and is in a position to do so, says to companies, "You must go to this place, although we are going to cut back on you during the time when we must have the mobilization."

Companies tell me they have already been cut back in the Pacific Northwest. One company said it was 150,000 kilowatts, and it said another 150,000 were coming up, and that within the course of a few months probably they are going to have requirements for cut-backs of 343,000 kilowatts. Yet they say we must continue to expand in that area.

I think the taxpayers should have some consideration in matters of this kind.

Mr. ANGELL. May I ask a question, Mr. Chairman?

Mr. LARCADE. The gentleman from Oregon.

Mr. ANGELL. May I ask my good colleague, Is it your contention then that we should eliminate hydroelectric power and go to coal or gas or something of that sort?

Mr. HARRIS. No, sir.

Mr. ANGELL. That is what you are driving at, because the purpose of this bill is simply to firm up hydroelectric power running into millions of kilowatts. We have 40,000,000 kilowatts of hydroelectric power there.

Mr. HARRIS. We have 70,000,000 kilowatts in my area, too, that the Government could get right now if they wanted to go down there for it.

Mr. ANGELL. But gas and coal are so high we cannot go into it.

Your argument is we should go to coal and gas and eliminate hydroelectric power.

Mr. HARRIS. I do not contend that at all, sir. You are misinterpreting my statement.

Mr. ANGELL. You are contending we should eliminate those industries where we have hydroelectric power in great quantities and use gas and coal instead.

Mr. HARRIS. I think the people of this country should be considered in connection with these continued expansions in areas that are not appropriate.

Mr. ANGELL. They should; and, if you could supply the power at a comparable price on gas and coal, that is fine and dandy. However, the companies are not taking your power because they can get much cheaper power where they have hydroelectric power.

I think it is conceded by everyone that hydroelectric power is cheaper than gas and coal. Gas and coal are expendable, whereas hydroelectric power is not. It goes on for ever and ever, as long as the water falls and the sun shines. However, yours is expendable.

Mr. HARRIS. I certainly do appreciate the gentleman's feeling, and I said before I started here that I always——

Mr. ANGELL. I do not think we should have one area trying to defeat another area, like you are doing here. I think we should have fair play throughout the United States and treat everybody alike. If one part of the country, like yours, has gas and coal, then let us use that. If another has timber and another has hydroelectric power, let us use that. But let us not have one section of the country sectionalizing against another section of the country and trying to defeat one area.

Mr. HARRIS. I should say to the gentleman that is exactly the statement I made when I started. The reason I came to this committee is because of the program you have under way here, which seems to be necessary because of the action of a Government agency taken many months ago, when I had the question up with them trying to show them that the companies themselves, who are more familiar with this problem than anybody else, and who know something about the economics involved, took the position that if they were let alone they would very likely meet the Government requirements in an area and at a cost that would be a saving to the taxpayers.

That is what I am trying to bring to you out of my experience, gained through going into this matter.

Mr. ANGELL. Mr. Chairman, may I interrogate a little further?

Mr. LARCADE. The gentleman from Oregon.

Mr. ANGELL. These companies put these plants for making aluminum out there in the Pacific Northwest themselves. They put them there because it was more economical to do so. We could use this power to more advantage than to give it to the aluminum companies. They do not bring important payrolls into our part of the country. Just a few men operate one of those plants. They take power which is very valuable and with which we could supply many industries, and take a few men and turn out aluminum with it. They do it because it is to the best interests of the Government to have cheap power to produce aluminum.

Now, this plan is not for changing it all over to steam. It is merely for firming up the power for the big aluminum industries, and for all the other private industries as well, by having a few stand-by plants built so that when we are passing through a period of low water we can firm up the power so that it is continuous power all year round. It is economical to the Federal Government and the companies involved, and it is the best thing for everybody concerned, as well as your community.

Mr. HARRIS. I should say to my good friend I agree with him it would be just as inappropriate and impractical and uneconomical to try to take a plant that is already established out in your area or another area and pull it up and move it to another area. I think this whole question which was announced a week or two ago about the moving of projects somewhere else was very likely for another reason altogether. I do know they are not going to pick up a 30- or 40-million-dollar aluminum plant in your part of the country and move it to mine, or the South, or some other place. Neither are they going to take one in my part of the country and move it out there.

What I am talking to you about, Mr. Angell, is the action of the Government agencies on the further expansion of forcing companies to go into an area where there is a shortage already, which consequently makes it necessary to bring about this high-cost stand-by fuel in order that you may have the peaking all the time from your great hydroelectric power projects.

I am for hydroelectricity. I voted for them in your area and in mine for the 11 years I have been in Congress.

Mr. ANGELL. I voted for projects in your area, too.

Mr. HARRIS. I appreciate that, and I tried to preface my remarks by saying we are interested in all the United States. That is what I said a moment ago with reference to the cost of the hydro area fur-

nishing power cheaper than other areas by private companies. I told the committee just before you got here that the pool of private power companies in my area is sending to the TVA area now 100,000 kilowatts to help firm up the progress in that area.

Mr. DEMPSEY. I think we are getting pretty far afield here. The question is, Congressman, whether a certain number of steam plants should be constructed in the Pacific Northwest area for the specific purpose of firming up power that is already there. That is the question before the committee. It is not a question of considering moving plants somewhere else, because that is not our job and I would be opposed to that.

Mr. HARRIS. So should I.

Mr. DEMPSEY. The question is whether we should construct these steam plants or whether we should not. It is not whether we should move them to Arkansas, or Mississippi, or New Mexico. We have plenty of gas in New Mexico. We are piping it to Los Angeles and San Francisco. However, that is not the question here. The question here is, Are these plants needed in this emergency or are they not? Period. That is all there is to it.

Mr. HARRIS. That is right. The question I am bringing to you is, Are they needed, and is it an emergency because of the arbitrary action of a Government agency, which is still contending that you should expand——

Mr. DEMPSEY. I do not know anything about any arbitrary action.

Mr. HARRIS. Say it is an action then and strike out the word "arbitrary."

Mr. DEMPSEY. If it was at that time, the plants are there now. Now, are you going to give them the power to run them or not?

Mr. HARRIS. We are talking about projects that have been ordered and that are not developed yet.

Mr. DEMPSEY. These plants to firm up the power are not anticipating, but are trying to meet a present need there.

Mr. HARRIS. As I understand it, it is a requirement because of the present expansion and future expansion program, which would make this necessary.

Mr. DEMPSEY. I have listened to the Secretary of the Interior, to the engineer for Bonneville, and various other people. You have not heard the testimony. Now, I just got a call from Albuquerque, N. Mex., from a very good friend of mine who is a private power company president. I am for private power interests, and I am for them because they pay taxes to the State and to the Federal Government. I am not for the extension of these stand-by plants all over America. My friend had been told that I was. There is not a word of truth in it.

We are considering eight plants. Period. In an emergency. I get sick and tired of the private power boys putting this propaganda out through New Mexico and other places, saying that we are going to build these plants all through the United States to put the private power people out of business. That is just perfectly silly.

Mr. HARRIS. I can assure you that I hope the gentleman certainly does not interpret my remarks as participating in any propaganda that some private power companies might be putting out.

Mr. DEMPSEY. I say to my colleague, for whom I have great respect, that you have given us a history here which is fine, and I am

glad to hear it. However, I think we are getting too far afield in connection with this hearing. We had three witnesses the other day, and now we have four. I think we are getting too far afield in this hearing because of the injection by the private power interests of the idea that they think someone, in some way, or somehow, is going to usurp their rights with public power. That is not the point here at all. If it were, I would be against it.

Mr. HARRIS. I have a letter here I wrote to Mr. Chapman——

Mr. DONDERO. Will you permit me, Governor?

Mr. HARRIS. I would like to answer that.

Mr. DONDERO. I wanted to ask you a question.

Mr. DEMPSEY. I thought you wanted to ask me a question.

Mr. DONDERO. No. I wanted to ask the witness a question.

Mr. HARRIS. May I reply to that statement first? On March 9, 1951, I advised Mr. Chapman, after having talked to him over the telephone on this problem, regarding which I told him about the availability of power in our area now and which is coming into our area, which included the Norfolk and Narrows Dams and the Bull Shoals Dam, two of which are large projects in my own State now, and the Blakeley Mountain Dam in that area, which is to come in this year and next year. So, therefore, you can see I was bringing to the attention of the Secretary the availability of power at that time.

Mr. DEMPSEY. As I get the point of my good friend's story it is that you want to see some plants go to Arkansas. Is that right?

Mr. HARRIS. I certainly do, if it is within the interests of the defense program and the people of this country, and the taxpayers who have to stand the cost.

Mr. DEMPSEY. That would be very satisfactory to me, but that is not the point here.

Mr. HARRIS. That is the point I am bringing to you.

Mr. DEMPSEY. I know, but it does not fit in as part of the picture we are considering here.

Mr. MAGEE. Mr. Harris, would the defeat of this bill bring any plants to Arkansas? I think the Governor is right. That is the question. Why are you against this bill?

Mr. HARRIS. I said, to start with, I was very reluctant to appear against any legislation that might affect another section of the country. Consequently, if it is a question of needing the stand-by and having to have it in an area where you have these hydroelectric power plants going, I did not come here for that purpose. I came here because in my opinion what makes this bill necessary, which is before us now, is the action of the Government in going to a certain section of this country when if it had been in another part of the country this request would not have been of such an emergency character.

Mr. MAGEE. That is water over the dam. That is past.

Mr. HARRIS. That is what is the matter with this country. We have too much water over the dam.

I do not want to argue with the members of the committee.

Mr. DEMPSEY. When this bill was explained by its sponsor, Mr. Jackson, he pointed out it was an emergency and that it was to firm up the hydroelectric power there, which is just the very thing you say you are not against. If there was a mistake made a year ago or 2 years ago, there is nothing we can do about that mistake now. If we

could correct that mistake I would be happy to help do so, but the plant has been installed.

Mr. HARRIS. But it is my understanding, and I believe I am correct, from my investigation of this, that the aluminum industry is being advised now that it is necessary for them to expand far beyond the present production now. If the Government is going to take such action as this leading into that, then what chance do such sections as mine have? What chance do we have?

Mr. DEMPSEY. Your deduction is quite different from mine in that respect.

Mr. HARRIS. Very likely it could be, and I could understand very well the reason why.

Mr. DEMPSEY. Why?

Mr. ANGELL. Mr. Harris, I do not think you are addressing your remarks to the problem before us. It is whether we should build these steam plants to firm up the power we now have. It is not a contest dealing with hydroelectric power versus gas and coal. You are talking about a long-range program that is not before us in this bill.

Mr. HARRIS. As I understand it, this is a long-range program.

Mr. ANGELL. It is to firm up hydroelectric power with stand-by steam plants. Every private industry does that.

Mr. HARRIS. Yes. What you are talking about is that in our area we are having to send our power out of our area to develop other areas that have no stand-by.

Mr. ANGELL. Are you opposed to stand-by plants in big projects where they have hydroelectric power?

Mr. HARRIS. No.

Mr. ANGELL. Then why do you oppose this bill? We have the largest amount of hydroelectric power in the United States and we need this to firm it up.

Mr. HARRIS. That is true. You have a wonderful development, which I am very happy about.

Mr. ANGELL. I think you are discussing a problem which is not before this committee at all.

Mr. HARRIS. I think it is very much before this committee.

Mr. ANGELL. The problem before us is, is it necessary to have stand-by plants, which you say you are in favor of?

Mr. HARRIS. But the thing I bring to your attention is the cost of power in the appropriate areas of the country would seem to me to require Government agencies to say this or that is in the interests of the people, and not make these orders and directives and then come in and say that because we have done that it is necessary that we now have tremendous expenditures in order to carry out what we have already started.

Mr. JONES. Will the gentleman yield? Would you oppose the project, Mr. Harris, if it were definitely shown that the investment would pay for the expenditures required for these projects?

Mr. HARRIS. I would oppose the project if it were for further expansion by the Government out of the Federal Treasury when it would be more economical to go somewhere else and do it. On that basis only.

Mr. JONES. I asked you this question: Would you be in favor of the Federal Government making these expenditures to an existing operation if it would make money for the Government?

Mr. HARRIS. I would, unless it was needed. If it was needed in the area then, of course, I would not oppose it. But just for the Government to go out and spend the taxpayers' money to go into private business somewhere—I cannot see that that is a good policy of this country.

Mr. JONES. I understood you to say that they were not needed?

Mr. HARRIS. It is my information that the reason this becomes necessary is because of the expansion requirements that are being made on the aluminum companies. If I am wrong about that, I would like to know.

Mr. JONES. I would like to have some information on that, because we have had no evidence on that. We have had the Secretary of the Interior and the people who belong to the power associations up there saying that the increased consumption in homes and factories and everywhere, just like it occurred in all parts of the country, has caused it. The per capita consumption increased and it is needed generally, and the private power people up there need it too.

Mr. DONDERO. Mr. Chairman, I would like to say a word.

Mr. LARCADE. The gentleman from Michigan.

Mr. DONDERO. Have you made any study as to the increase in the cost of power in the Northwest developed by steam power, as contemplated in this bill?

Mr. HARRIS. It is my understanding that the cost of steam power in the Northwest would be a minimum of 5 to 6 mills.

Mr. DONDERO. Now, is it a fact that one of the aluminum companies was encouraged by the Government not to build a plant in either Louisiana or your State, and to go to the Northwest?

Mr. HARRIS. Not only encouraged, but they accepted it as a directive, for expansion. Not for the present plants now, but for additional expansion.

Mr. DONDERO. I think it was a plant which the Alcoa Co., wanted to locate there?

Mr. HARRIS. That is true, and it was mentioned in the directive of Mr. Chapman, in his policy statement of March 1.

Mr. DONDERO. If they had located either in Louisiana or your State, that would be private industry, and the development would be by private money.

Mr. HARRIS. The steam plants would. So far as the hydro is concerned, it would not. It would be by Government.

Mr. DONDERO. But the hydro would be sold to these plants just the same as it is being sold to the plants in the Northwest now.

Mr. HARRIS. Yes.

Mr. DONDERO. Do you know anything about the expansion of hydroelectric power in the Northwest? Do you know about an application pending for 3 years for the expansion of hydroelectric power, which has been denied or opposed up to this hour?

Mr. HARRIS. It is my understanding that the question of the Aluminum Co. of America going to the Northwest was based on the completion of what was known as the Rock Island Dam.

Mr. DONDERO. Can you give the committee any comparitive rate by which or at which aluminum could be produced in your area as compared with aluminum produced in the Northwest?

Mr. HARRIS. All I can do is point to the experience in World War II. We produced the cheapest aluminum in the United States in our own State during World War II.

Mr. DONDERO. Why can you not do it again?

Mr. HARRIS. I am sure we can.

Mr. DONDERO. I think you could too. That would be private investment and not Government investment if it goes into your area.

Mr. HARRIS. That is true. With the exception of the consumption or the utilization of the power from these hydroelectric plants such as Bull Shoals, Norfolk, and Blakeley, which comes in next year, and Narrows Dam, which is already in.

Mr. DONDERO. Is that power sufficient without the establishment of steam plants?

Mr. HARRIS. It would be necessary to utilize steam plants or availability of thermal power in the area which is available, and the additional low-cost power would be made available without any question of this 2- or 3-year proposition.

Mr. DONDERO. Do you know all applications for the establishment of steam plants up to this time have been denied by Congress, excepting for the one in the TVA?

Mr. HARRIS. As I understand it, the REA people are building some steam-generating plants in the southwestern power area—I think two in Oklahoma and one in your area.

Mr. DONDERO. Is that part of the TVA?

Mr. HARRIS. No. That is to utilize or to add to the hydro power in that area for stand-by purposes. I think there are two 30,000-kilowatt generating plants under way. One is constructed, I believe, in Oklahoma, and one up in your part of the country.

Mr. MAGEE. One in my district and the other one in the Missouri River area is in the courts now.

Mr. HARRIS. Yes. Outside of those, I do not know of any others.

Mr. DONDERO. I have had it looked up. There are six instances where Congress has not given them the money to build steam plants.

Mr. LARCADE. Has Mr. Jones concluded?

Mr. JONES. Yes.

Mr. LARCADE. The gentleman from Washington.

Mr. MACK. I think perhaps I can add some clarification to the controversy that has been raised here this morning. The purpose of these steam plants is not to meet the long-range needs of aluminum production, but is to meet a current and pressing emergency condition that prevails due to low water stages which exist now in the Columbia River.

In the Pacific Northwest we have five aluminum plants. The cost of those plants, not including working capital, is about $20,000,000 per installation. Those plants use $13,600,000 annually of electricity, which they buy from the Bonneville Power Administration. The payrolls of all five plants, which employ approximately 3,800 people, are approximately $13,500,000 a year. Thus, the power bill of these five plants is almost exactly the same as the labor bill of the five plants.

Power is one of the largest items of cost in the operations of those plants.

Mr. HARRIS. That is true in all aluminum plants.

Mr. MACK. Every river in every part of the country at certain seasons is lower than in other seasons of the year, and that is true of the Columbia. In the fall months the flow of the river decreases, and as the flow decreases the production of power decreases. As a result, we have two kinds of power. We have the firm power, of which the Bonneville Power Authority can say, "We can guarantee to you every hour of every day, every week in the year." That is the firm power—the power that can be delivered uninterruptedly every hour of the year. That brings a higher price, of course, than the power which can be interrupted. The amount of firm power available is determined by the minimum flow of the stream.

Above the minimum flow there is generated a certain amount of power which is available most of the year, but not available at all seasons. This is called interruptible or secondary. The Bonneville Power Authority sells this secondary or interruptible power at a lower rate.

The proposed steam plants will firm up the interruptible power, thus taking care of the power-shortage situation in the seasons when the river drops.

Now, as to moving these plants from the Pacific Northwest, I talked to Mr. Fairman, Administrator of the Federal Defense Power. Mr. Fairman said he could not point to one single location in the entire United States to which any of these plants could be moved where power is not in short supply. I was glad to hear you say that you agree with Mr. Fairman and I that none of the existing plants should be moved out of the Northwest to some other place. To remove them would require the dismantling of those plants, shipping the equipment in them to another location and constructing a new aluminum plant and building another power plant.

Mr. HARRIS. It would be a ridiculous situation.

Mr. MACK. I agree with you. You said in your statement you were delivering to the TVA 100,000 kilowatts of power. I understand you to mean you were delivering 100,000 kilowatts of installed capacity, which would be in kilowatt-hours about 800,000,000 kilowatt-hours of power. That sounds like a tremendous amount of power, but 800,000,000 kilowatt-hours of power is not as much power as the smallest aluminum plants on the Pacific Northwest now use in 1 year.

Mr. HARRIS. It would be enough to run three pot lines of an aluminum plant.

Mr. MACK. The five Northwest aluminum plants consume over 6,000,000,000 kilowatt-hours of power a year. That is, all five plants combined consume that much.

Mr. HARRIS. They made a wonderful contribution to the security of our country, too.

Mr. MACK. I would be glad to see your State secure aluminum plants. Aluminum is a product that will be used in wartime, but also one that will be used in times of peace. There are in this country in excess of 16,600 manufacturing plants that are using aluminum in the manufacture of finished products. There is a wide opportunity in times of peace for the expansion of this industry. The light-metal industry is only about 10 years old. The first light-metal plant was established in the Pacific Northwest only 10 years ago. It is a new and growing industry and is going to be one of the big industries in

the United States. Your area as well as our area is not going to have fewer plants but a great many more plants than either have now.

Mr. HARRIS. I appreciate the expression the gentleman just made insofar as the feeling between the development of one section of this country as against another is concerned. We agree thoroughly on that.

The thing I quarrel with the Government agencies on is that if the companies are required to do something that they think is not as economical as it would be otherwise, then to require them to do that and then later find ourselves just where we are today, coming out and saying, "Now you have to do this because of the action we took back yonder," is something which is wrong.

Mr. MACK. I agree with you. The owner should be the one to decide where a plant is to be located. It is his money that goes into the plant. The Government should not interfere or disperse these plants where they want them. The man risking the money to establish a plant should have the say as to its location.

Mr. HARRIS. I am not talking about my area, but all the areas where these resources are available. We want to make it available, and we think it is to the best interests of the taxpayer that that area be utilized with what we have instead of sending it all over the United States at great transportation costs in order that the results may come from that area.

I think I do have a justifiable complaint when I come to the committee with my problem.

Thank you very much, Mr. Chairman.

Mr. LARCADE. Are there any further questions by the gentlemen on my right?

(No response.)

Mr. LARCADE. Are there any further questions by the gentlemen on my left?

Mr. VURSELL. Yes, Mr. Chairman.

Mr. LARCADE. The gentleman from Illinois, Mr. Vursell.

Mr. VURSELL. Possibly the gentlemen from Oregon or Washington might throw some light on this. I know it is a little out of order to read anything that comes from the National Association of Manufacturers, or the United States Department of Commerce, or the United States Chamber of Commerce, or the Illinois Chamber of Commerce. However, I will beg your pardon for quoting something that comes to me now from the Illinois Chamber of Commerce.

They say:

> We have noted that H. R. 4963 is advocated on the grounds of meeting a power emergency said to exist in the Pacific Northwest, but it has been represented to us that the Interior Department has been discouraging the Federal Power Commission from approving licenses for Portland Power Electric Co., the Idaho Power Co., and other business concerns from going ahead with plants that could provide far more additional capacity than contemplated under this bill.

I thought maybe the gentleman from Portland might have some information on this.

Mr. ANGELL. The gentlemen who appeared before this committee during this hearing from the Federal Power Commission testified they were not doing that and they were proceeding regularly with those applications. Of course, that has nothing to do with this bill.

Mr. VURSELL. What about Mr. Chapman? Did he testify, too, they were not doing it?

Mr. ANGELL. That is true. That is absolutely true. Personally, I am very much in favor of allowing those licenses and permitting those plants to go forward. Personally, I would like to see all the private power plants constructed that the money is available for.

Mr. VURSELL. Mr. Chairman, continuing for a moment, if I may, I think the gentleman from Arkansas is to be commended for bringing the information in here that he has and raising the question that he has. I think it may be possible to build some stand-by steam plants over there because the Congress is led out to a point, according to the policy which existed for 10 or 15 years, where they get into a crisis or emergency and then the Congress is called on to pull the chestnuts out of the fire. This may be another one of those instances directed by the Interior Department.

However, I do not think we ought to follow the lead of the Government and the Government ought to push us into a monopoly of power in the Northwest. I do believe that with the thousands and thousands of years of coal supply under the ground, not only in Arkansas but all throughout southern Illinois—the millions of tons of coal that will run on for thousands of years—that we ought to look to developing all of the various areas of this country, including coal.

It is my thought that if they produced the cheapest power during the last war, that probably in this Mississippi Valley and maybe in southern Illinois, in my State, or maybe in Louisiana, or maybe in Arkansas, they can produce this power as cheaply as anywhere else over the long run. I do not think a Government policy should be followed by this committee or this Congress that will tend toward a monopoly on anything in any particular section of this Nation as against the wisdom of using what we have all over the Nation.

I yield.

Mr. DONDERO. As the record shows—and I want to keep it straight—the Secretary of the Interior does not deny they have opposed the granting of these licenses for the further development of hydroelectric power, even by municipal governments, and they have lain there for 2 or 3 years. They have not been granted. Had they been developed, the chances are there would have been no purpose in this bill being before us. I think the power could be firmed up with hydroelectric power just as well as it could with steam power.

Mr. MACK. Will the gentleman yield?

Mr. LARCADE. The gentleman from Illinois has the floor. Do you yield to the gentleman from Washington?

Mr. VURSELL. Is the gentleman from Michigan through?

Mr. DONDERO. Yes.

Mr. VURSELL. I yield.

Mr. MACK. I think I can explain the text of the letter which was read by my colleague, Mr. Vursell. The Department of the Interior has opposed the building of certain dams in the Pacific Northwest. It has opposed the building at least for the present time of those dams which interfere with the fish runs, such as those proposed for the Cowlitz. The fishing interests of the Pacific Northwest—and they represent a considerable industry—contend that the dams on the Columbia and its tributaries should be built first which interfere

least with the fish runs. I think that is a sound contention. There are 20 to 30 dams to be built on the Columbia and its tributaries, and certainly we should build first those dams that interfere least with the fish runs. Later, as more power becomes necessary, we can build the dams which might interfere with the fish runs.

The fishery people, including the State fishery department, say that if given time they can solve this problem of getting the big fish upstream over the dams and the small fish downstream without destruction of the fish.

The controversy is not over whether any dams should be built, but over which dams should be built first.

Mr. Vursell proposes some of this electricity should be generated by coal. Obviously, the generation of steam power is much more costly, and every witness who has appeared before the committee admitted it.

In the Pacific Northwest, in delivering its five aluminum plants $13,500,000 of electricity, the Bonneville Power Authority sells current to them at 2.37 mills per kilowatt. Mr. Harris testified in the Texas area the cost would be 3.3 or up to 3.7. That may not be a very large increase. I pointed out previously, however, that the cost of the power is almost exactly the same as the cost of the labor bill, about $13,500,000 for each.

That would mean this: If the aluminum makers were paying $10 a day per man in wages and would increase that $10 a day wage to about $14.50 a day, or a $4.50 increase, it would have the same effect on the cost of aluminum as would the increasing the Northwest power rate of 2.37 to the Texas rate of 3.7 mills.

Mr. HARRIS. With one exception. You overlook the fact that the transportation cost is very high and it means a lot more when the end product is produced.

Mr. MACK. That is true.

Mr. HARRIS. That is, to the people of the country.

Mr. MACK. The same situation exists in the steel and coal industry. The ore is mined in the Mesabi Range and is moved 1,000 miles to the coal of the Pittsburgh area. We are moving the bauxite ore of one area to where the power exists because we cannot move the power to the bauxite.

I appreciate that you can produce more power in your State, and when you have more power you certainly should have more aluminum plants than you now have.

Mr. HARRIS. We have more available now. The thing I am talking to this committee about is the fact that the Government agencies are apparently directing the companies to go to other areas with further expansion, when at the same time they contend there is such a serious shortage of power in that area that they are having very great difficulties there. Before any of these steam plants could be brought in we hope the emergency will be over.

If I might say so, just to reply to the colloquy between the two gentlemen, both good friends of mine, over the dams in the Northwest—and I had not intended to get into it—I would like to say most any dam the Federal Government wants to build they can go ahead with if they get the authority; but let one of your local districts out there construct a dam and then you run into all of those difficulties you have been talking about.

Mr. LARCADE. Have you concluded, Mr. Vursell?

Mr. VURSEL. I have.

Mr. SMITH. Will the gentleman yield?

Mr. LARCADE. The gentleman from Mississippi.

Mr. SMITH. At this point I think it should be pointed out to the gentleman from Arkansas that in connection with these dams no mention has been made of what I think is a very important factor, and an all-important factor. The State legislature by almost unanimous vote opposed the construction of this dam for the city of Tacoma, and if that means anything to anyone who attaches any importance to the voice of the State in these matters, I think it should be considered in this argument about whether or not the Department of the Interior should approve a dam.

I think the Department of the Interior should be commended for its action in accepting the right of the State to have some voice in these matters.

Mr. LARCADE. The gentleman from California is recognized.

Mr. SCUDDER. I would like to say to the gentleman from Arkansas: To my way of thinking his argument is relevant to the bill pending before us, I am looking at it from the point of view as to the necessity of the expenditure of $60,000,000 and whether or not the $60,000,000 could be saved to the Federal Government, by encouraging private enterprise to provide for the production of the aluminum which is necessary.

As I understood the testimony the other day, this is a temporary firming up. It is not a firming up that is supposed to be done to take care of the power being developed in the Northwest, it is to provide for extra power for aluminum production.

Mr. DEMPSEY. Let me say it was stated definitely that it was a permanent firming up and not temporary.

Mr. ANGELL. Yes.

Mr. DEMPSEY. Four hundred thousand.

Mr. SCUDDER. Maybe I misunderstood that, but these small plants scattered throughout the entire Northwest seem to be more of a temporary program.

Mr. DEMPSEY. Not at all.

Mr. SCUDDER. If we are to continue the development of the power potentital and continue firming up, I do not know whether this plan would be the most economical in the long run, especially if you take into consideration the low rate of the interruptible power.

It is my understanding that the aluminum industry was attracted to the Northwest because of the cheap interruptible power for the manufacturing of aluminum. Now you have to establish plants for firming up the necessary power. I believe we should develop aluminum plants in areas where it would be more economical, and where cheap fuel is available.

I would like to get a comparison as to the cost of aluminum in the Northwest as against, say, Arkansas and the price they can deliver it to the Federal Government. Then we may be able to determine whether it is good business for us to expend $60,000,000 in the construction of these plants. Let them use the interruptible power, which is admittedly cheap, and develop aluminum but go elsewhere where fuel is cheap for extra production. If you have to firm it up with expensive steam power, then the rate of 2.37 per kilowatt-hour

might increase to quite a large figure when you add to it the cost of the power generated by steam plus transportation, which would also be involved.

I think before we authorize the expenditure of $60,000,000 for steam plants this committee should have some information regarding the cost of the aluminum produced by private enterprise in one area as compared to the delivery to the Government in the Northwest.

Mr. HARRIS. Mr. Chairman, I am sorry if I have apparently taken so much time of the committee. I did want to bring this story here and show you what my information is which I obtained in going into this, insofar as firming up power in the Northwest is concerned, or any other section of the country, for needed operations there, when the Government has expended huge sums of money in these dams.

That is not the question I bring to you. I bring to you the question of the Government in our defense program making requirements for expansion of these industries in certain section of the country, when in certain areas like ours it might be more economical. We have 140,000 kilowatts coming off at Bull Shoals, and I have not heard the Secretary making a lot of claims down there for stand-by power to go with that. We have stand-by power in all of the area that is integrated and that will firm it up right now. That is what I bring to the attention of this committee. We have the resources down there in our part of the country, in the great Southwest, and let us utilize it. That is what we want to do in this defense program and not run down some other area of this country. We want to utilize what we have in the best interests of this mobilization program.

Mr. LARCADE. Thank you, Mr. Harris. We are very glad to have had you here before our committee.

Now, gentlemen of the committee, in the words of our former chairman, Mr. Whittington, with due deference and in all fairness, the acting chairman desires to call the attention of the committee to the fact that the hearings on this bill have extended over a period of 3 days, in which times the proponents were given 3 days for testimony. This is the first witness that has appeared in opposition to the bill.

Mr. MAGEE. Mr. Chairman, let us not say that. We listened for nearly a whole day to opponents of this bill.

Mr. LARCADE. I do not recall that.

Mr. MAGEE. There is a witness who testified here.

Mr. LARCADE. Mr. Ely consumed 1 hour. I did not know he opposed the bill.

Mr. MAGEE. The representative of the city of Tacoma appeared here and took up a pretty good part of 1 day in opposition to this bill. So, let us not misquote the facts.

Mr. LARCADE. In all fairness, I think the opponents should be given the same time as the proponents, and I certainly want to call the attention of the committee to the fact that there are other witnesses who are listed here who desire to appear in opposition to this bill. I do not believe we will be able to conclude the hearing today and we may have to go over until tomorrow.

Mr. DEMPSEY. Let us hear all we can.

Mr. LARCADE. At this time would the gentleman from Arkansas, Mr. Tackett, be willing to defer his appearance until later, or do you desire to be heard at this time?

Mr. TACKETT. Either way.

Mr. DONDERO. He is here now and I think we should hear him. I think the committee should give the opponents the same length of time as the proponents have had. I insisted on that in the St. Lawrence seaway hearing even though I was in favor of the St. Lawrence seaway and they were against it.

Mr. LARCADE. How long would you require, sir?

Mr. TACKETT. I will not require over 5 minutes, as far as I am concerned.

Mr. LARCADE. All right, sir. We will be glad to hear you at this time.

STATEMENT OF HON. BOYD TACKETT, A MEMBER OF CONGRESS FROM THE FOURTH CONGRESSIONAL DISTRICT OF ARKANSAS

Mr. TACKETT. All right, sir. I am Boyd Tackett, Member of Congress from Arkansas.

Mr. Chairman and members of the committee, to begin with, if I may have Mr. Angell's attention, I would like to clear up a misunderstanding or a mistake that was made a moment ago. I believe Mr. Angell stated there were 40,000,000 kilowatts of electricity in his area and Mr. Harris rebutted such statement with an allegation that there were 70,000,000 kilowatts of electricity in his area in Arkansas and in the Southwest. Both of them are badly wrong.

Mr. ANGELL. I said over 40,000,000 of potential hydroelectric power.

Mr. TACKETT. Well, there is not over 69,000,000 or 70,000,000 kilowatts of available electricity in the whole United States. About 5,000,000 of that is in the Pacific Northwest and about 3½ to 4 million in our area in the Southwest.

Mr. MACK. You are talking about steam plants as well as hydroelectric generation?

Mr. TACKETT. I am talking about all available electricity in the United States, public and private, from hydro and steam.

Mr. MACK. That is all right.

Mr. ANGELL. I was talking about potential and not developed hydroelectric power, and you are talking about something which I was not talking about.

Mr. TACKETT. I wanted to get that straight because I did misunderstand it, and some others in the room also misunderstood it.

I want to say at the beginning there was either a great blunder by our Government in insisting upon industry moving to the Northwest, or it was for the purpose which this committee is now called to consider. I might explain that.

It was a great blunder to send all of our defense plants to the Northwest at a time when they did not know whether they had sufficient electricity or electrical power, or it was for the purpose of giving them the opportunity to come before this committee and ask you to furnish additional power upon the theory of firming up the hydro power. I do not know which it is.

I do know that the only fuel for steam plants in the Pacific Northwest will be either coal of a low grade of a very limited amount, or wood waste products from that area. Of course, the B. t. u. rate I understand has not been determined before this committee on either the low-grade coal or the wood-waste products. Therefore, it will eventually come down either to transporting gas from the Southwest

or transporting coal from the Southwest or Pennsylvania, West Virginia, or some other area.

It has been difficult for me to understand why these plants—and when I am speaking of plants I am talking of the aluminum plants—why they should have been encouraged to locate in the Pacific Northwest, when 90 to 95 percent of the bauxite ore is produced in the State of Arkansas, where there is an abundance of coal and where there is an abundance of gas. I have not been able to understand why they have been encouraged to go to the Pacific Northwest, and why they are still being encouraged to go there when there is as much available electricity to produce aluminium where the bauxite ore is located as there is in the Pacific Northwest.

In other words, the Government is encouraging these aluminum plants to locate in the Pacific Northwest, where the fuel for prime power will need to be transported from the very area where the aluminum ore is located, or where the coal will have to be transported from over in West Virginia and Pennsylvania, or Arkansas, or somewhere down in that area of the Southwest, to the Pacific Northwest, and away from the area where the bauxite is located.

I just wanted to bring some of those facts to the attention of the committee and to ask the committee to determine the cost of producing aluminum in the Pacific Northwest in comparison to the cost of producing aluminum in the area where the aluminum ore is located. I am not an expert on the cost of producing electricity, but I do believe you will find that steam power energy can be produced in the Southwest where there is ample coal and gas for 1½ to 2 mills a kilowatt. Of course, as the gentlemen have mentioned here before, there is no question but that hydroelectricity is a lot cheaper, but it is seasonal electricity, and naturally needs to be primed until you do have all the energy available you expect to have in the Pacific Northwest.

Are there any questions anyone cares to ask? I believe that Mr. Harris has covered practically everything that I wanted to bring to your attention. I just wanted to mention some of those things.

Mr. LARCADE. The gentleman from Minnesota, Mr. Blatnik.

Mr. BLATNIK. No questions.

Mr. LARCADE. The gentleman from Michigan, Mr. Dondero.

Mr. DONDERO. No questions.

Mr. LARCADE. The gentleman from New Mexico, Mr. Dempsey.

Mr. DEMPSEY. No questions.

Mr. LARCADE. The gentleman from Oregon, Mr. Angell.

Mr. ANGELL. Mr. Tackett, is it not true that most of those bauxite deposits in your area are owned by the aluminum companies?

Mr. TACKETT. I am sure that they are.

Mr. ANGELL. And those are the same companies that put the plants in the Northwest?

Mr. TACKETT. Under a Government ultimatum.

Mr. ANGELL. It was their money that built the plants, and so apparently they thought it was more economical to put the plants there than to put them in the South, where they owned the bauxite deposits?

Mr. TACKETT. I do not know whether it was that or not. I am sure that the aluminum companies do not object to being subsidized by the Government with cheap electricity.

Mr. ANGELL. Do you know the percentage of bauxite brought in from South America to the United States, compared with the amount that is used from your area?

Mr. TACKETT. No, sir; I do not. I only know that 90 to 95 percent of the bauxite ore in the United States is located in my area.

Mr. ANGELL. It is my understanding that a very small proportion of that is used in the manufacture of aluminum in the United States compared with the total amount of aluminum.

Mr. TACKETT. I do not know what the percentage is. I do know this—the bauxite from South America is shipped to my area where it is reduced before being transported to the Pacific Northwest.

Mr. ANGELL. And those same companies that own bauxite bring bauxite in from South America for the Pacific coast development?

Mr. TACKETT. I know that a greater percentage of our bauxite does come from South America, but the greatest percentage in the United States comes from my area. Even the bauxite from South America first comes to my area before being transported to the Pacific Northwest.

Now, I would like to remind the gentleman that if you had a strategic ore that was vital to the defense of this country located in the Pacific Northwest, I think it would be very silly for the Government to encourage people to locate their plants down in Arkansas, so far away from where the vital ore is located, knowing in addition that you would have to transport the ore down to Arkansas and have to transport gas or coal down to Arkansas from your area in order to provide electric power to process the ore.

Mr. ANGELL. Often it is cheaper to transport heavy materials, such as ore, a long distance by water than to take it a short distance by rail. We have ocean transportation in the Pacific Northwest and bring ore in there from everywhere, and it is at very reasonable cost.

Mr. TACKETT. I do not think it would require but very little time for the committee to determine the differences in the cost of producing aluminum in the Northwest or down in the State of Arkansas. I can tell the gentleman that I do not think the Interior Department or anyone else will contradict the fact that there can be available all the electrical power that is necessary for the production of aluminum plants just as fast as the plants could be built. The ore you speak of is not shipped directly to your area from South America.

Mr. ANGELL. I agree with you. May I say that I am not opposed to the development of your area and the production of aluminum there to the fullest extent possible, and I will go along with you on it. I think it should be produced wherever it can be produced most economically, and also in a war emergency where we have to have it we may have produce it everywhere regardless of cost. That has to be done in case of war necessity.

Mr. LARCADE. The gentleman from Mississippi, Mr. Smith.

Mr. SMITH. No questions.

Mr. TACKETT. If I understand the committee, you are called upon to provide temporary prime power while you are building the additional 20 or 30 dams. Is that true?

Mr. ANGELL. No, that is not. These are stand-by plants for a large hydroelectrical production area, to be used not only for this temporary purpose while the water is low, but throughout the years when-

ever there is a shortage of water. They have a stand-by plant to firm up the power, a long-range program and also an emergency program. It will take a couple of years to produce these plants, so it will not take care of their existing shortage of water this year, which is substantial, but if an occurrence of this comes again it will take care of that trouble that we have.

Mr. TACKETT. I am just wondering if the Interior Department advised this Congress when they were building all these hydroelectric dams up in the Pacific Northwest that it would be later necessary for them to furnish steam power to firm up that hydro.

Mr. ANGELL. We always knew that. Every private utility has stand-by plants, just like we need to have. You may want to have a plant overhauled, and you have another that you can use in such an emergency. When the water is low for a month or such matter as it is now in the Northwest, you have a stand-by plant that will firm up a large amount of power, so that great industries like aluminum industries depending on it will not have to shut down. It is common sense.

Mr. TACKETT. I understand the private companies and the public power companies firm up their hydroelectric, but those where they do firm it up usually have the necessary fuel with which to do it, and the Pacific Northwest——

Mr. ANGELL. We are right in the vicinity of that great new development up in Alberta, where they have perhaps more gas than you have down there in your area. I understand now they have consented to bring that gas down into the Northwest. It is only a short distance. We have immense quantities of coal in Montana right adjacent to some of these stand-by plants.

Mr. LARCADE. The gentleman from Alabama, Mr. Jones.

Mr. JONES. No questions.

Mr. LARCADE. The gentleman from Washington.

Mr. MACK. I would like to confirm Mr. Angell's statement that all the public and private utilities in the Pacific Northwest have stand-by steam plants in addition to their hydroelectric plants. The Tacoma public utility, which was here opposing this bill, testified that it has a steam plant as an auxiliary to its hydroelectric plant.

I would furthermore like to point out to you, Mr. Tackett, that the 400,000 kilowatts of installed capacity which these eight power plants will provide is only a small part of the amount of electricity that will be generated in the area. The Bonneville operation alone is now producing 3,500,000 kilowatts of hydroelectricity. That means that the 400,000 kilowatts proposed by this bill represents only 10 percent of the total of the Bonneville total output. Within a few years more power dams will be brought into production, so that this 400,000 kilowatts then will represent only about 5 percent of the total output of the Bonneville Power Administration. Later on, when all the dams are completed, which probably will be in 30 or 40 years, this 400,000 kilowatts of steam plant installed capacity will represent less than 2 percent of the total power that will be sold by the Bonneville Authority.

Mr. TACKETT. But you do realize, I am sure, that if you build those additional dams you are going to come before Congress and ask for additional steam power.

Mr. MACK. No. This is the situation: That steam plants, if operating now, prior to this low-water period, would have built up storage behind the dams. As more dams are built, more water is stored behind each additional dam and can be held there, to be released when the water is low downstream. We will get the power from storage. For instance, the Albeni Falls Dam which they are proposing to build in Idaho will generate only 48,000 kilowatts of electricity at the dam site. That is a very small amount. But by impounding great pools of water behind it that can be released in dry seasons, that dam in effect will have a capacity for the production of 250,000 kilowatts. We will get 200,000 kilowatts from storage. I doubt very much if we will have to continue building more and more steam plants to firm up power. The impounding basins behind the dams will do the firming up.

Mr. TACKETT. I am not going to argue with the gentleman, but you will find if you make an investigation that if you build hydroelectric projects you are going to have to have steam power, if you are expecting to use the same amount of electricity the year round that the hydro will produce during the peak season.

Mr. DEMPSEY. That is what we are trying to get.

Mr. TACKETT. I know that is what you are trying to get. I do think we have a very legitimate complaint down in our area against the Government continuously encouraging industry that should be located in our area to go up in the Pacific Northwest, even in face of the fact that they have such a shortage of electricity that the Defense Mobilizer has encouraged plants to be moved from that area.

Mr. JACKSON. I wonder if I could clear up one point. Let me say I am interested in helping the State of Arkansas as a member of the Interior Committee on Appropriations. I have supported a lot of their projects down there.

I would like to clear up one point on this matter of bauxite. It is true that in Arkansas and in the Southwest area they possess 95 percent of the bauxite reserves. I just had this checked with the Interior people. The United States of America imports 60 percent of the bauxite used by American companies.

The next point that I want to make clear, so there is no misunderstanding, is this problem of transporting bauxite from Arkansas to the Northwest. That just is not the case. Virtually all of the bauxite used by the aluminum companies in the Pacific Northwest comes from South America. So there is not this problem of railroad transportation. That is a fact, and if there is any question about it we will have the officials of the Government here. I think it is collateral to the matter before the committee, but I wanted the record clear on that point.

Mr. TACKETT. I thank the gentleman. That is correct. About 40 percent from our area and about 60 percent from South America. However, an investigation will convince the gentleman that the bauxite from South America is first reduced in the South before being transported to his area for finishing.

Mr. JACKSON. Sixty percent comes from outside of the United States.

Mr. TACKETT. Yes.

Mr. JACKSON. And 95 percent of all the bauxite reserves in the United States are down in your area.

Mr. TACKETT. That is right.

Mr. LARCADE. The gentleman from Missouri?

Mr. MAGEE. No questions.

Mr. LARCADE. The gentleman from California, Mr. Scudder?

Mr. SCUDDER. I would like to have some further information. I am interested in this program strictly on a dollars-and-cents basis. I am interested in the taxpayers of our country and how long they are going to be able to continue with this expenditure of money that is going on.

Mr. MAGEE. Will the gentleman yield at that point?

Mr. SCUDDER. No. I just want to ask the gentleman from Arkansas a question. I would like to know the difference between the delivered cost of aluminum in your State to the Federal Government as compared to other parts of the country. I think that wherever it can be delivered the cheapest at this critical time that there it should be developed.

Mr. TACKETT. I agree with you.

Mr. SCUDDER. I would like to know which is the better deal for the United States Government. I live in the West. The Northwest is really my homeland, but I feel that we have go to take the taxpayers into consideration, and I have endeavored to conduct myself along that line as a Member of Congress. I want to know where the best bargain for the taxpayers of the United States of America can be had, whether developed in your area or developed in the Northwest. That is what I am interested in.

Mr. TACKETT. In order to utilize the natural resources of bauxite in the United States, I do not think it would be questionable—I do not have the figures—but that the aluminum could be produced a lot cheaper in our area than in the Pacific Northwest. That is the question that I did put to the committee. I hope the committee will ascertain the difference in the cost of the production of aluminum in the Pacific Northwest with the cost of producing aluminum in our area. I think you will find it is a lot cheaper down in our area. There is no question about the availability of power there just as fast as they build aluminum plants. They can also bring into existence the necessary power just as cheaply as they can produce it in the Pacific Northwest or any other area in the United States. I do not think that will be questioned by anybody.

Mr. SCUDDER. I think that is a very pertinent thing for our committee to understand, and whether it is necessary to expend $60,000,000 of the taxpayers' money when private industry can produce it at the same or lesser cost in another area without any investment by the Federal Government.

Mr. MAGEE. Will the gentleman yield at that point?

Mr. SCUDDER. Yes.

Mr. MAGEE. I have listened to the gentleman from California for several days shedding crocodile tears about the taxpayers.

Mr. SCUDDER. They are not crocodile tears; they are real tears.

Mr. MAGEE. I thought perhaps with all the testimony that by this time you would know this is a loan. It will be paid back and amortized in 35 years with interest. I thought maybe the gentleman from California had read the bill. He has been a regular attendant here, and certainly he should have learned in the last week that this is a loan.

Mr. SCUDDER. It is still the taxpayers' money being loaned, and as to whether it comes back with interest or not I am not sure. I

know that we are in a very critical financial position at this time, and if we can accomplish the same result without the further outlay of taxpayers' money I am for it.

Mr. LARCADE. Have you concluded, Mr. Scudder?

Mr. SCUDDER. Yes.

Mr. LARCADE. The gentleman from Oklahoma, Mr. Steed.

Mr. STEED. No questions.

Mr. LARCADE. Thank you very much, Congressman. We are very glad to have had you appear before our committee.

The next witness is Mr. Frank M. Wilkes, president of the Southwestern Gas & Electric Co.

STATEMENT OF FRANK M. WILKES, PRESIDENT, SOUTHWESTERN GAS & ELECTRIC CO., SHREVEPORT, LA.

Mr. WILKES. Thank you very much. Mr. Chairman, I have with me the general attorney of my company, Mr. Richard Arnold. I would like to introduce him at this time. He will sit up here with me, and if you gentlemen want to ask me some legal questions I do want to rely on him.

Mr. LARCADE. That will be perfectly satisfactory.

Mr. WILKES. I want to thank you very much for allowing me to come up here today. We just learned of this hearing about Thursday of last week, and I was tied up in some legal matters in Texas and was unable to come up here until this morning.

I have a very short statement which I would like to read and then make myself available for questioning by the members of the committee.

Mr. LARCADE. You may proceed.

Mr. WILKES. My name is Frank M. Wilkes. I live in Shreveport, La. I am president of the Southwestern Gas & Electric Co., with headquarters in that city. I am an engineer by profession, having graduated from the University of Kentucky in 1908 with the degree of bachelor of electrical engineering. From that time until the present time I have been continuously in the utility business with the exception of 2 years that I spent in the Army during World War I. For the past 33 years I have been active in top management of two major utility systems.

The Southwestern Gas & Electric Co. supplies the power needs of an area embracing the northeast quarter of Texas, the northwest corner of Louisiana, and the western one-quarter of the State of Arkansas. It may seem out of place that a man from the southern part of the United States should be appearing before you gentlemen today in connection with a bill to provide Government-owned steam electric capacity for the Pacific Northwest. However, on the statement made by Mr. Chapman before this committee last week, it seems to be clearly the purpose of the Department of Interior to establish a precedent or pattern for federally financed and owned steam electric generating plants that will be followed out in other parts of the country, especially in the southwestern area in which my company operates.

It has been consistently the policy of the Congress over may years to deny any agency of the Federal Government the right to construct and operate steam generating plants except for war or defense pur-

poses. The Department of Interior, however, has just as consistently and by every devious means attempted to slip by this clear will of Congress.

One of the gentlemen mentioned REA. The REA is not a Federal agency; it is a loaning agency that loans funds to rural cooperatives which are formed all over the United States. The act under which the Rural Electrification Administration was set up provides that this money shall be loaned for the construction of generating plants, transmission lines, and distribution lines for the sole purpose of serving persons in rural areas who are not receiving central-station service. Those steam plants belong to the farmers, and the farmers of American pay back to the Treasury of the United States the money which is loaned them to construct steam plants. There is no doubt about their right to build steam plants, and they have never been contested.

In order that you may have before you some of the efforts which have been put forth by the Department of Interior to obtain steam power, I want to give you very briefly the history of what has been happening in the Southwest.

In 1944, when it became apparent that the war in Europe was soon coming to an end, the Congress of the United States began to consider a number of worth-while projects for the purpose of furnishing employment for the soldiers who would soon be released from service. In June of 1944 an omnibus flood-control bill was being considered by the Flood-Control Subcommittee of the Senate headed by Senator Overton as chairman. Senator Overton, as you know, long and ably represented the great State of Louisiana here in the Senate.

We had already had experience in our area where a dam which was constructed for flood-control purposes had been operated by its operators strictly as a power dam, with the result that in May of 1943 this action climaxed in a disastrous flood, which the Army engineers upon investigation said had done more damage in 1 week than power from the dam could be sold for over a 25-year period. My good friend Senator Overton was kind enough to allow me time to appear before his committee. I called attention of the committee to this flood and the danger, not only of destruction of life and property by that improper operation of flood-control dams, but also the danger that the Federal Government would use the power and energy from these dams for destructive competition with existing companies. When the bill was reported out of committee, the committee said:

> The committee desires an amendment which will provide a convenient and practical method of disposing of power at projects under the control of the War Department without setting up a public power trust—

those are their words, not mine—

> which would be unduly competitive with established private power utilities.

The part of section 5 which we feel gave us protection from Government encroachment on our business is as follows:

> The Secretary of the Interior is authorized, from funds to be appropriated by the Congress, to construct or acquire, by purchase or other agreement, only such transmission lines and related facilities as may be necessary in order to make power and energy generated at said projects—

certainly it did not apply to any steam plants, because all you can produce at hydroelectric projects is hydropower—

available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, and privately owned companies.

In January of 1946 Mr. Wright, Administrator of the Southwestern Power Administration, which is a branch of the Department of Interior, came before the Appropriations Committee of the House with a request for $223 million to construct a wholly duplicating system of transmission lines covering the entire Southwest, described as the States of Missouri, Arkansas, Louisiana, Oklahoma, part of Texas, and part of Kansas. Included in the request for $223 million was a request to construct some 800,000 kilowatts of steam capacity. This appropriation if it had been granted would, we think, have forever stopped hydro development in our area, as the capacity of steam plants can be increased by the simple method of obtaining additional appropriations in succeeding years to eventually push out of business the privately owned companies.

The committee of the House refused to grant authority for the steam plants and limited the amount of construction which could be done by the Southwestern Power Administration to a single line, some 550 miles long, connecting a dam on the Red River in Texas to a dam on the Norfork River in northern Arkansas.

When the Southwestern Power Administration come before a similar Committee on Appropriations in the Senate, they were again told that there was no legal authority that would permit the Federal Government to own or construct steam plants for the generation of electric energy, and that the Flood Control Act of 1944 clearly provided that the only power and energy which could be sold by the Department of Interior was that produced incidentally from flood-control, irrigation, or navigation dams.

Having thus been categorically denied the right to acquire steam generating plants by both Houses of the Congress, Interior turned to another expedient. In 1949, when the appropriation bill for the fiscal year 1950 was being considered by the Senate, Senator Kerr, of Oklahoma, put in an amendment to the appropriation bill which provided for a continuing fund of $300,000 to be used for emergencies and to provide continuity of service and for the lease of transmission lines and the purchase of electric energy. In introducing this amendment, Senator Kerr said he wanted to make it crystal clear that the purpose of the clarifying amendment with reference to the continuing fund was—

that there is no purpose, desire, nor authority for the Administrator to rent any generating facilities with the money in the so-called continuing fund. * * * The Senate committee has indicated that the Administrator may make contracts with utility companies similar to the Texas contract.

That is a contract made between the Southwestern Power Administration and the Texas Power & Light Co. whereby the Southwestern Power Administration sells to the Texas Power & Light Co. half of the output of the dam at Denison, Tex., on the Red River. The Texas Power & Light Co. then transmits that over their own transmission lines, without the expenditure of any Government funds, and delivers 70 percent of what it buys from the Government to the preferred

customers of section 5 of the Flood Control Act. Those customers are former customers of the power and light company. Their contracts with the Texas Power & Light Co. are canceled, and they make a new contract with the Southwestern Power Administration, but the power is delivered from the sources of the Texas Power & Light. It is a very fine solution, I think, to the problem of public and private power, as it fulfills all the directives which Congress has put out in regard to the sale of this hydroelectric power.

The Administrator has said it was his purpose to do that. The sole purpose of the continuing fund is to enable him to do that, and the sole purpose of the clarifying amendment is to make this crystal clear.

The next year, in 1950, just what the real purpose of the Kerr amendment was began to be "crystal clear." The Rural Electrification Act of 1936 provided funds for rural-electrification purposes. These funds are made available for the construction of generating plants, transmission lines, and distribution lines for the purpose of serving persons in rural areas who are not receiving central-station service. A total of approximately $2,800,000,000 has been appropriated by the Congress for REA purposes.

I might say I think the rural-electrification movement here in America is one of the finest things this Congress has ever done. It has given to the farmers of America a tool which they can use in their operations. I think 90 percent or better of the farmers in America have electricity available to them for their use.

Out of $2,800,000,000 which has been appropriated by Congress over the last 15 years, so far only $1,750,000,000 has been actually advanced for the purpose of building transmission lines and distribution lines and a few generating plants to reach persons in rural areas who are not receiving central-station service. This leaves on the shelf in the REA slightly more than $1,000,000,000, although the total REA effort in the country has now provided lines to more than 90 percent of all possible customers. When I speak of the REA, I am speaking now of the agency here in Washington.

The REA and the Department of Interior have now gotten their heads together and evolved a scheme whereby the REA would loan money to supercooperatives, in reality dummy corporations, who would use this money to build steam generating plants and hundreds of miles of transmission lines. The supercooperatives then would lease the transmission lines to the Department of Interior Southwestern Power Administration in our territory and would sell the entire output of the steam plants at the switchboard to the Department of Interior. That is certainly far away from the purposes of the Rural Electrification Act. This scheme avoids the clear intent of the REA Act of 1936, since this power and energy is not for the purpose of serving persons in the rural areas who are not receiving central-station service.

On the other hand, it enables the Department of Interior to avoid the clear intent of Congress by giving them practical ownership and control of steam generating plants. In all of a dozen places in the United States this scheme has been set up, although none of them are at this time operating. There is now a suit pending in the District Court for the District of Columbia by a group of Missouri companies to enjoin three of these projects which are lined up for Missouri.

Another one which has been planned for installation in northwest Arkansas is now in the courts in Arkansas, seeking relief to the power companies in whose territory this competitive system is to be installed.

At the time the REA Act of 1936 was passed, the legislative history of that act shows clearly that its author, Senator Norris, who sponsored it in the Senate, and Congressman Sam Rayburn, who sponsored it in the House, said over and over again that this was not going to go into competition with anybody. It was not to put anybody out of business. The funds were to be provided for rural electrification and were to be used solely for the purpose of furnishing electricity to persons in rural areas who were not receiving central-station service.

In this last session of Congress we made an appearance before the House Appropriations Committee and the Senate Appropriations Committee in opposition to the use of the continuing fund for the purpose of implementing this deal between the Department of Interior and the REA. Both the House and Senate took action against the continuing fund and amended it so that now there is no way for the Department of Interior to pay the REA supercooperatives for use of the transmission lines constructed by it, nor for the electric energy which it proposed to purchase from the super coop by direct appropriation from the Congress.

That continuing fund of $300,000 might just as well have been a continuing fund of $10. The $300,000 continuing fund is just like a spring of water. You dip it out to the full extent of $300,000 and immediately it would fill back up. Both Houses of Congress, when they realized what the intent was of the Department of Interior and the REA, to use that continuing fund without ever coming back to see you gentlemen for appropriations of taxpayers' money, struck down that provision of the continuing fund and made it so that now every year the Department of Interior has got to come back to you gentlemen and ask you for an appropriation. The $300,000 continuing fund as it slipped through the Congress was one of the most iniquitous things that could ever be foisted on the people of America.

Mr. DONDERO. Do you notice anything in this bill that has the same earmarks?

Mr. WILKES. Yes, sir; they have a continuing fund in here. If the Department of Interior can get continuing funds, this Congress will never have to appropriate money for them any more, because they use the continuing fund to do what they plan to do.

Since present contracts for generating plants in Missouri and the one in Arkansas and one in Oklahoma will amount to an annual sum of some 7 or 8 million dollars, we do not believe that the Congress of the United States will appropriate this sum of money, as there is quite a lot of difference in the sound of amount involved between a simple continuing fund of $300,000 and the tremendous sum of 7 or 8 million dollars per year. And that is just for a small section of the United States. That can be multiplied over and over again if they kept that continuing fund in there, and they could have bought out every power company in the United States and have taken over the furnishing of something like $2.5 billion or $3 billion of electricity if you gentlemen had not stricken it out this year.

The continuing-fund authority having thus been taken away, we cannot but feel that the power shortage in the Northwest has been more or less promoted by the Department of Interior so as to give

them another opportunity to try to obtain the right to build steam-generating stations with the idea of making a pattern for the entire country.

In supporting this view, I want to call your attention to the statement of Congressman Hébert, of Louisiana, which appears in the Congressional Record of Friday, September 28, at page A6262. I wish that I had time to read the entire article, because I think it would give a lot of light to you gentlemen about just what we are fussing about here. I will read a few excerpts, and I hope you gentlemen, if you have not read it, will read the rest of it.

This is by Congressman Edward Hébert, of Louisiana:

> There are those who demand adequate defense of the Nation as a means of political gain and as a ruse for the further socialism of the country and the destruction of constitutional government.
>
> This is a general charge, but I back it up with two specific instances which I submit for your consideration.
>
> Strange enough, the Department of the Interior is involved in both instances.
>
> In one instance it is the demand for oil and in the other the demand for aluminum, but both demands are made in the name of defense, which is the popular theme song of the moment and the most appealing to an unsuspecting citizenry, which, unfortunately, remains too apathetic or disinterested to examine the record and prefers to accept catch phrases as substitute for logic.
>
> The New Orleans States, in another splendid editorial, again rings the welkin and tears away the mask of hypocrisy from the faces of those who would cry "defense" from their throats and simultaneously shackle defense with their hands.

And again:

> A deliberate shortage of public power is created in order to build up a demand for public power under the guise of national defense.
>
> It was for defense all right, but not for national defense. It was for the defense and protection of those who would march us down the road to socialism and are doing it with the aid of private enterprise itself.

I wish I had time to read that whole article, because it is a very fine one.

It is an easy thing for the Department of the Interior to create a power shortage by establishing, in any area, plants for the manufacture of aluminum, as this metal requires enormous quantities of electricity.

In the manufacture of aluminum, it takes 4 pounds of bauxite to make 2 pounds of what is called alumina. Alumina is aluminum oxide. Two pounds of alumina are then taken and made by an electrolytic process into the metal which we call aluminum. All of the plants for processing bauxite are located on the Mississippi River or east of the Mississippi River. The largest one is located at Mobile, Ala. Another large one is located at Baton Rouge, La. Another large one is located at St. Louis, and another one is located in the heart of Arkansas, right on top of the bauxite which is produced in Arkansas, the Hurricane Creek plant.

As the gentleman said a while ago, 60 percent of the bauxite that comes in from the outside comes up the Mississippi River and into Mobile Bay, and in those plants it is processed into alumina. That alumina is then taken from those plants to go to the reduction plants, some of them in the Pacific Northwest and some of them in the South, but every pound of bauxite that is being processed now in this country has to come to those alumina plants which are located along the Mississippi River.

There is only one way that a shortage of electric power for aluminum can be taken care of, and that is the installation of generating equipment to accompany the aluminum plant at the time it is put in. While alternating current can be used for aluminum manufacture, it has to be rectified to be used on the potlines as direct current. The cheapest and best method of obtaining direct current for the manufacture of aluminum is by the use of internal-combustion engines directly connected to direct-current equipment, equipment similar to the units that are installed on the Diesel engines that run our railroads.

It appears that the logical place to put additional aluminum manufacture would be in the Southwest. The State of Arkansas contains approximately 90 percent of all known deposits of bauxite in the United States. The four States of Oklahoma, Arkansas, Texas, and Louisiana have within their borders 77 percent of the known gas reserves in the United States, as well as 71 percent of the known oil reserves in the United States. An aluminum plant located in that area can receive its raw material, bauxite, with less transportation expense, certainly, than is required to produce aluminum in the Pacific Northwest. Also, there is a practically inexhaustible supply of natural gas available at from 10 to 15 cents per million B. t.u., which is the equivalent of $2 or $3 per ton of coal.

The Alcoa people are building an aluminum plant near Corpus Christi, Tex., using the cheap natural gas and using Diesel-driven direct-current generators. Their power will cost them, from this source, approximately 2 mills per kilowatt-hour.

Mr. Kaiser is building another plant at New Orleans which will use, I am informed, steam turbines with gas for fuel. Alcoa is also building another aluminum plant in central Texas which will be served by steam turbines generating power, using lignite as fuel. This cost will be slightly less than the price of gas. There are certainly many other points in the area of these four States where similar plants could be built. This method of developing the aluminum industry would prevent the recurrence of emergency conditions such as now confront this Nation from the expansion of the manufacture of aluminum. We have these emergencies coming every time we get to thinking about war or looking like we are going to go into war, and there is never anybody, either in the Government or private companies, that has those vast amounts of power on the shelf.

No company, nor can any Government agency, afford to hold large quantities of generating capacity idle awaiting for an emergency. If, however, an aluminum plant is built with a source of generation integral to it, then when the aluminum plant is put in "moth balls" the electric-generating equipment to operate it will also go in "moth balls", and both of them will be ready to start operation again in a few weeks when another emergency occurs.

We are very fearful that the bill which is presently being considered by your committee will become the pattern for the building and operation of steam electric-generating plants throughout the Nation and especially in the Southwest area where we operate. The desire of Interior to control steam generation should be apparent to this committee from the history that I have just related, and that desire seems unquenchable whether the capacity is acquired by legal means or not.

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I might point out in addition that the pending bill does not confine the use of power and energy to be generated at the proposed steam plants for purely defense purposes. The bill reads that the power may be used for publicly and privately owned distribution systems in the Northwest area. If those plants are needed out there for defense purposes, we have no objection and we want to see them built, but we want it hung on defense. We do not want to have the Department of Interior coming in here with one hand and asking you to furnish something for defense, and the same voice at the same time saying, "We are putting this in not for defense but we are establishing a precedent where the Federal Government is going to go into competition" —illegally, we think—"with its citizens."

Moreover, the testimony of Secretary Chapman and Administrator Raver was to the effect that the steam plants would be used for the general purpose of firming up hydro in the Northwest for the benefit of area loads and would not be confined to any purpose of national defense. It seems to us plain that, if Interior is to be allowed to acquire and sell for general commercial purposes the output of steam electric-generating plants, the threat posed to the private electric-utility industry in our area is of the first magnitude, and we accordingly have a very deep interest in the activity of this committee and in the outcome of the proposed legislation.

We might point out in addition the fact that the pending bill, contrary to most existing legislation, does not provide for the confirmation and approval of the rate schedules of by the Federal Power Commission. This is a departure from a long-established rule providing for checks and balances by the Federal Power Commission having to certify the adequacy of rates charged by the Department of Interior. The lack of this provision in the pending legislation would enable the Department of Interior to make its rates, without regard to return on the investment of Federal money, so low as to absolutely run out of business any private concern who might come in conflict with them.

The Pacific Northwest is unusually blessed with fine water power. While I am not familiar with the exact nature of the power situation in the Pacific Northwest, I do know that power produced from water power at Bonneville and Grand Coulee costs approximately $17.50 per kilowatt a year, which on a 100-percent load factor would be roughly 2 mills per kilowatt-hour.

If steam plants are built in that area, the cost of producing a kilowatt-hour from them would, as stated by Mr. Chapman last week in his appearance before this committee, be more than 1 cent per kilowatt-hour. The resulting cost of power going into the aluminum potlines on the basis of 75-percent hydro and 25-percent steam power would be approximately 5 mills per kilowatt-hour, more than double what Mr. Mack said awhile ago was the price from Bonneville. He said it was 2.37 mills, I think, but, if you put this steam in there and run in just 25 percent of the time, that price will go up to 5 mills per kilowatt-hour. So, somebody is going to lose some money on it, almost double what power can produced for in aluminum plants located in the Southwest area.

We are not opposing anything that is necessary in the defense effort. We do want, however, to impress upon this committee that every safeguard should be placed around the construction of steam plants

by Federal agencies, so as to insure that this device will not be used for the nationalization of the utility industry in the United States.

We advocate further in this connection that if the pending bill should be favorably considered by this committee the language be changed so as to provide that these Government steam plants shall be constructed and used solely for the common defense of the United States, which, we think, is the only lawful purpose for which the Federal Government may construct and operate such plants.

That completes my statement.

Mr. LARCADE. Thank you very much, Mr. Wilkes, for this very fine statement. I am sure you will be ready to submit to interrogation by members of the committee.

Any questions by the gentleman from Alabama, Mr. Jones?

Mr. JONES. No questions.

Mr. LARCADE. The gentleman from Michigan, Mr. Dondero?

Mr. DONDERO. Yes; just one or two. Mr. Wilkes, I think the substance of one of your statements was that up to this time license for the privilege of establishing steam plants by the Department of the Interior has been refused by the Congress.

Mr. WILKES. Yes, sir; it has, in every instance. The one I recited here about the request for $223,000,000 for use down in my territory, to put in 800,000 kilowatts of steam capacity, was denied by the Congress—unequivocally denied. Senator Carlson, I remember, at the time of the hearing, read section 5 of the Flood Control Act, and he said there is nothing in this act that provides for producing electricity with steam. He further went on to say that according to his idea of the Constitution there is no constitutional right that will allow the Federal Government to build steam plants to produce electricity to sell in competition, any more than the Federal Government has a right to build clothing-manufacturing places or any other manufacturing.

Mr. DONDERO. You think this bill, of course, would establish the precedent to do exactly that?

Mr. WILKES. If passed in its present form, it would establish a precedent for that very thing.

Mr. DONDERO. In 1947 the Southwestern Power Administration was denied a budget request for $6,688,000. That was to build two steam plants.

Mr. WILKES. That is the one to which I referred. That was part of the $223,000,000.

Mr. DONDERO. And in the Central Valley project the Bureau of Reclamation was denied also on five different occasions money to build steam plants.

Mr. WILKES. That is correct; yes, sir.

Mr. DONDERO. On the basis that there was no legal authority for it.

Mr. WILKES. Yes, sir.

Mr. DONDERO. That same rule or principle applies to this bill?

Mr. WILKES. Yes, sir.

Mr. DONDERO. I want you to discuss for the committee your idea on the question of this revolving fund, which I think is set up in subsection (d) on page 3 of the bill. Would that do exactly what has been attempted in the past on the same question?

Mr. WILKES. Yes, sir; I think it does exactly the same thing that the continuing fund did before. They will never come to Congress any more to make any report on how much it is costing, if you are

using the continuing fund, to pay for wages and fuel and everything else, and the Congress of the United States will never know just where the money is going. They will never come back to you for another appropriation.

Mr. DONDERO. They collect that money, of course, from the users of electricity?

Mr. WILKES. On the sale of electricity; yes, sir.

Mr. DONDERO. They hold it and then disburse it or expend it, if that authority is given, without making it necessary to come back to the Congress or report to the Congress. Is that the position you take?

Mr. WILKES. That is the position that we take on it.

In the wording of section 5 of the Flood Control Act it states that the rates for electricity from these multiple-purpose projects have to be approved by the Federal Power Commission, and they have to be high enough to amortize the investment in the power facilities and to take care of all interest on the money that has been put in them, and to pay operating expenses. They are not allowed in that section, however, to deduct that from the money which comes from the sale of electricity.

The act further says that all funds collected from the sale of electricity from these multiple-purpose projects should go into the Treasury of the United States, after setting up a trust fund to be derived from the sale of this power and energy from multiple-purpose dams that belong to the people of the United States.

Mr. DONDERO. You are discussing what the law is now?

Mr. WILKES. I am talking about the original law; yes, sir. Then that goes into the Treasury of the United States as a trust fund, so that the people in the Pacific Northwest do not have to pay for plants in Arkansas and people in Florida do not have to pay for those in the Pacific Northwest. The plants would stand on their own bottom, and all the money collected should go into the Treasury of the United States.

Then, when they slipped this continuing fund thing in there, they abrogated that provision of that law. Here was this trust fund to take care of the interests of the taxpayers, and that just knocked a hole in the back end of the Treasury where they can take a scoop and scoop it out. That was the way it was until the continuing fund was stricken down this year. I think this continuing fund in here does exactly the same thing.

Mr. DONDERO. In other words, that would be a departure from the present law?

Mr. WILKES. Yes, sir.

Mr. DONDERO. Over on page 4 in the same subsection there is a rate provision. Would that be setting up a new or a different provision from the present law?

Mr. WILKES. Yes, sir; that sets up a new agency of making rates. The Secretary of the Interior now makes the rates anything he wants to in this bill, and the Federal Power Commission, which is supposed to be the watchdog of the Government, does not have any authority to pass on those rates, whether they are too high or too low.

Mr. DONDERO. This would be a new provision?

Mr. WILKES. Yes, sir; brand new.

Mr. DONDERO. And a departure from the law that was in existence for more than 50 years?

Mr. WILKES. That is my understanding of it; yes, sir.

Mr. DONDERO. I understand that you are president of a corporation or company that amounts to $100,000,000. Is that approximately right?

Mr. WILKES. Yes, sir.

Mr. DONDERO. As president, do you think you ought to go to your board of directors and advise the spending of $60,000,000 of your company's money to establish steam plants in an area where it is doubtful as to the cost of the fuel that they would use or be able to obtain?

Mr. WILKES. I am afraid if I made that kind of a recommendation I would not be president very long.

Mr. DONDERO. I do not think you would be, either. That is all.

Mr. LARCADE. The gentleman from New Mexico, Mr. Dempsey.

Mr. DEMPSEY. Do you know of any public utility in the Northwest which opposes the construction of these plants?

Mr. WILKES. No, sir. I think the companies in the Pacific Northwest—I cannot speak for them.

Mr. DEMPSEY. Do you know of any who would build them?

Mr. WILKES. I think they would have built them, Mr. Dempsey, if it had not been for the fact that the Federal agencies have gotten a strangle hold on the Pacific Northwest as far as production of power is concerned.

Mr. DEMPSEY. The testimony before this committee is that they would not have any desire to build them, and instead of that they are anxious to have the Federal Government provide this stand-by power.

Mr. WILKES. As I said just a moment ago, the Federal Government has got a strangle hold on the Pacific Northwest.

Mr. DEMPSEY. You have stated that you are not opposing these plants if they are necessary to national defense.

Mr. WILKES. That is right. I am not opposing them if they are necessary for national defense. They have a perfect right to put those plants in under the National Defense Act.

Mr. DEMPSEY. If you are not familiar with private power operations in the Northwest, and I understood you to say you were not——

Mr. WILKES. That is right. I am to a certain extent.

Mr. DEMPSEY. Well, if you are not, I would get from what you have stated that your first interest here would be to have these plants constructed in your area.

Mr. WILES. No, sir. If I led you to that opinion, I did not mean it.

Mr. DEMPSEY. I will not quarrel with you about that.

Mr. WILKES. The thing about it is that I do not want this Congress to establish the precedent that the Department of Interior can build steam plants. We think that it is unconstitutional for them to do so.

Mr. DEMPSEY. If you do no want the Department of Interior to build these plants, and if they are necessary to the national defense, you are inconsistent in your statement.

Mr. WILKES. No, sir.

Mr. DEMPSEY. First you say you are for the national defense.

Mr. WILKES. Wait a minute. Here is my opinion. I do not know whether I made it clear or not.

Mr. DEMPSEY. You did not.

Mr. WILKES. I say, if we need these plants out there, build them, but build them under the National Defense Act. Do not give them a

new departure where the Department of Interior can say, "We have authority from Congress to build steam plants all over the United States."

Mr. DEMPSEY. I would not vote for any such authority.

Mr. WILKES. I do not think you would, from the statement you made a while ago. You do not want to see it any more than I do.

Mr. DEMPSEY. I want to see private plants wherever we can get them.

Mr. WILKES. Yes, sir.

Mr. DEMPSEY. I do not want to see plants constructed here and there throughout the United States that pay no State or Federal taxes. I do not think that is proper competition. But we have a situation in the Northwest where we have this hydroelectric generation, and they do need firming-up power. I think you would agree to that.

Mr. WILKES. Yes, sir; they do; and as I understand it the best way——

Mr. DEMPSEY. How are you going to get it except by the Federal Government?

Mr. WILKES. The best way to get firming power in the Pacific Northwest is to go ahead and develop more hydro on those rivers in the Pacific Northwest. You have the grandest water power in the United States. It is entirely different from the kind of water power we have down in our territory.

One of the things that is worrying me is I have here a statement which was made by Mr. Krug, former Secretary of the Interior. At that time he was running the TVA. This statement was made in a hearing before a subcommittee of the Committee on Military Affairs in the House of Representatives, Seventy-sixth Congress, on Senate bill 1796, to amend the Tennessee Valley Authority Act of 1933. He was coming before that committee at that time to obtain money to buy out the utilities in Tennessee, and he says this:

> I am authorized to say that in the opinion of the Authority's Board the price finally agreed upon is somewhat in excess of the Board's opinion as to the value of these properties, without consideration of what might be termed nuisance value.

These are private industries that had been pioneering the electrical business in Tennessee, and this same group just a few years after the TVA Act was passed were talking about nuisance value. I do not want them to buy me out for nuisance value and put me out of competition. I am telling you that in the Pacific Northwest, sooner or later, those companies will go down, as you know some of them already are in a close situation. I know they have themselves over a barrel now where there is no help for them.

Mr. DEMPSEY. I do not want to see the United States get over a barrel.

Mr. WILKES. I do not want to, either.

Mr. DEMPSEY. I heard this morning from Arthur Prager, of the Public Service Co. of New Mexico. He has been advised that this bill authorizes construction of plants all over the United States. This is not the case at all.

Mr. WILKES. Mr. Chairman, Mr. Chapman in his statement the other day made that categorical statement. It is right here. He said that they are going to need steam plants in other jurisdictions.

Mr. DEMPSEY. There is authority for 8 plants, period. There is no broad authority to go beyond that.

Mr. WILKES. If you gentlemen will just fix that, so that you definitely have not given that authority——

Mr. DEMPSEY. Then would you be for this bill?

Mr. WILKES. I have no objections to it.

Mr. DEMPSEY. If it is 8 plants?

Mr. WILKES. I want it definitely fixed so that the Department of Interior will not use that as a precedent to go all over the United States and build them.

Mr. DEMPSEY. I am sure the Department of the Interior would not have my vote to go all over the United States and build them.

Mr. WILKES. That is what I want you gentlemen to do.

Mr. DEMPSEY. I am very glad to have listened to you today, and I am happy, insofar as these 8 plants are concerned, that we seem to see eye to eye. You feel as I do. They should be constructed.

Mr. WILKES. If they are necessary. I think they have done this deliberately. I think they have created a power shortage out there. I think now that you probably are going to have to do something about taking care of that situation by going ahead as Mr. Ely suggested, and some of the people from Tacoma. As I read in the record here, they want to go ahead with some more hydro. I think that is what you ought to be doing out there. That is the only cheap power you have.

Mr. DEMPSEY. They are going ahead with the hydro just the same.

Mr. WILKES. According to his testimony, they can finish that Cowlitz plant in a year and a half sooner than the steam plants. I have not heard anybody dispute his testimoney on that.

Mr. DEMPSEY. I did not hear his testimony.

Mr. WILKES. The thing I am afraid of—and I think you can see why I am afraid of it—is that the Department of Interior has tried over and over again in the past 10 years to get steam power. If anybody wants steam power, it is because you are limited in the amount of hydro power you can produce. Someday all of the good hydro sites in the United States will be developed, and there are not enough of them to take care of the very rapidly growing demand for electricity. The Department of Interior feels if they are going to continue with the slow attrition and taking over of the utility industry of America that they are going to have to have the right to build steam plants, and that is a fight which has been going on and will continue to go on as long as the companies can stand up and fight.

Mr. DEMPSEY. If they build steam plants, I hope they are built with private capital.

Mr. WILKES. They should be built that way.

Mr. DEMPSEY. The testimony I have listened to here convinces me that these eight plants should be built. Private capital will not do it. The necessity exists, and I see nothing else to do but go ahead and construct them. I thought you thought the same way.

Mr. WILKES. I hope you get my point, Mr. Dempsey, and I hope you will concede to it in this bill.

Mr. DEMPSEY. Not to go beyond these eight?

Mr. WILKES. Not to make a precedent. Mr. Chapman said the other day he wanted to build them in the Southeast and Southwest.

That is what brought me up here. I would not have been up here unless Mr. Chapman had said that in his own statement.

Mr. DEMPSEY. I would not be for that.

That is all, Mr. Chairman.

Mr. LARCADE. The gentleman from Ohio, Mr. McGregor.

Mr. MCGREGOR. I have an observation and some questions, Mr. Chairman. First I want to congratulate Mr. Wilkes for his splendid statement. You certainly are familiar with the subject before us for consideration. I, as one member of the committee, am very appreciative of the fact that this legislation does not immediately involve your section of the country.

I would like to make the statement that in my opinion this particular bill has been timed perfectly, to be honest about it. I cannot help but feel that by the passage of this bill as a defense measure we are establishing a precedent and giving the consent of Congress for the establishment of steam plants for power which in my opinion is not constitutional.

Relative to the private power developers of the great Northwest, to be rather blunt I think they are afraid of their present position out there or they would be in here in opposition to this legislation. They are afraid of the reaction of some one in power here in Washington.

Mr. WILKES. I think you are absolutely right, Mr. McGregor. Just south of the Pacific Northwest, in the great State of California, some of the biggest utility companies in the United States are located. They have built steam plants and developed them out there, with this continual threat that Mr. Dondero mentioned a while ago of the Department of Interior to build steam plants down in the Central Valley. These people in the Pacific Northwest are afraid to come up here. They know their throats will be cut the minute they did it.

Mr. MCGREGOR. Would you agree with me in this position? There seems to be—and I am in accord with what my friend Mr. Dempsey has said—at this minute there probably is an emergency out there; but if we go along and pass general legislation such as the way this particular bill is drafted, it certainly is in the power of the Secretary of the Interior, Mr. Chapman, to establish plants in other areas which have a temporary power shortage, and then we would have another emergency and they would come in for some more steam plants in order to firm the power. In other words, I cannot help but feel that this is simply a foot-in-the-door proposal, which can be used as a precedent so that the same program would be established in other sections of the country—which will certainly drive out of business private industry—a policy I am not in accord with.

I heard Mr. Chapman's statement that he wanted to be fair to private industry, but it seems to me that the Department is very unfair as far as public power is concerned—this administration is following a program step by step to put the Federal Government in competition with private business.

I would like to ask you: In your opinion, is not this Government going into direct competition with the power developers and private power developers of this country?

Mr. WILKES. Yes, sir, they are. They are going directly into it.

When these hydro plants were built—and I am not talking about the Pacific Northwest; I am talking about the ones in the central

part of the country, which were built by the Army engineers as flood control dams—and when they came to Congress to get the money for those dams, they indicated in the documents which came up here for the original appropriations that this hydro power was to be sold to the private companies that were already in operation. That was the basis on which the recommendation came here to this Congress. The various flood control bills and rivers and harbors bills that came over from the engineers show that the only way the Government could ever get its money back would be by selling that power and energy into the systems of the companies.

Of course, we are regulated, and whatever price the Government sold it to us for would be high enough to make a return to the Government of the money they spent, and our rates would be established on the basis of what we paid for it and the benefits would be directly to the people. Now since it has gotten into the Department of Interior's hands it is entirely different from what the Army engineers recommended to this Congress. Now it seems like the Department of Interior is going to have to do all of that themselves, and they are going to have to sell it piecemeal, which will keep it from ever being able to pay out. In the meantime, they will destroy one after the other of the companies who are unfortunate to be close enough to those developments.

Mr. McGregor. In other words, in this particular instance the Government is subsidizing the aluminum plants by giving them cheap Government power in the Northwest. Is that correct?

Mr. Wilkes. Yes, I think they do that. I do not think there is any doubt about that. I think the aluminum plants should stand on their own feet. I do not think the Government should undertake to furnish power to the aluminum plants in vast quantities and keep on building plants for them. I think the aluminum people ought to build their own plants, like they are doing in Texas now. The Alcoa people are putting in their plants at Corpus Christi and in the central part of Texas. The Reynolds Co. is putting in their own money for it. The Kaiser Co. down in New Orleans is putting in their own money and building their own plant down there. I think that is what ought to be done.

Mr. McGregor. Of course, Mr. Wilkes, some of us entirely disagree with whoever is responsible for locating some of these defense plants in an area where there is either a shortage of manpower or shortage of electric power, because we in the Central States have the coal and the electric power and the manpower to operate these plants if they would just put them in there. But we seem not to live right or something. We just do not get them.

Friday we discussed at quite some length how they were going to operate these steam plants, and we brought in a new subject that I had never heard of—hog fuel. Of course, we do not have hog fuel in Ohio. We have coal. I am wondering, if in your opinion, we could operate a steam boiler with hog fuel. Is there enough hog fuel out there available? Hog fuel, as I understand it, is sawdust.

Mr. Wilkens. We have quite a bit of lumber industry in our area, and they use hog fuel there. That is the outside bark of the logs which you are cutting planks off of. That goes into a grinding machine like an old-fashioned coffee grinder. It is ground up fine so

it can be thrown into the furnaces. To take care of 400,000 kilowatts, I do not believe you could get enough hog fuel in the whole Pacific Northwest to fire those things. It is kind of a joke to me when I hear them talking about hog fuel for that much power.

Mr. McGregor. How about oil fuel? If they could not use the hog fuel, how about the oil fuel, although I understand oil is critical?

Mr. Wilkes. Your price of oil now is around $3 a barrel. The fuel cost on that alone would go to 5½ mills at that price of oil. The present gas price of 10 cents is equivalent to 60-cent oil, and they are going to have to burn five times that price if they are going to have to burn $3 oil, so it becomes very, very improvident to put a steam plant out there. I think that Mr. Ely hit it right on the nose. I think they ought to go ahead and develop their water power. They have the best water power in the United States, with the exception of Niagara Falls.

Mr. McGregor. And it probably could be done quicker if this is an emergency?

Mr. Wilkes. His testimony was that it could be done a year or a year and a half quicker than they could put in these steam plants.

Mr. McGregor. And then we would not be opening the gate for steam plants in other areas?

Mr. Wilkes. I think you would be dodging the very dangerous precedent of allowing the Federal Government to manufacture something to sell in competition with its citizens.

As long as you have navigation, irrigation, and reclamation work, then you have this incidental power which is a byproduct and which I think they have a perfect right to sell; but when the Federal Government as such goes out and produces electrical energy from a steam or any other source and sells it in competition with its citizens, I do not believe it is constitutional.

Mr. McGregor. I certainly thank you, Mr. Wilkes.

I would like to ask you this question. I do not want to put you on the spot, but from your testimony I inferred this was too broad and we should so amend this legislation to confine this procedure to these particular projects and to come under the war emergency or defense act. Have you thought of any amendment which might be inserted in this legislation that would bring that about?

Mr. Wilkes. No, sir. I am not a lawyer. Dick have you thought of anything?

Mr. Arnold. To answer your question, Mr. Congressman, I might say that the language of the act is broad enough to allow this energy to be generated at these steam plants to be sold universally in the Pacific Northwest through public and private tranmission networks. It seems to me that that language is of a very general nature which perhaps ought to be deleted from the existing bill if you want to bring it within constitutional limits.

Mr. McGregor. And then define the power to be sold only to the emergency plants?

Mr. Arnold. That is right. I think that ought to be very definitely made by this committee before you would authorize them to build the plants. In addition, there is certain language that provides that after the emergency is over the Federal Government has the right to own, operate, and maintain these identical steam plants. I think that certainly is beyond any legal power that the Federal Government has at

this time, at least insofar as I am able to discover by reading the Constitution and the applicable authorities.

In those three instances I think that the existing language should receive the rather careful consideration of this committee, in order to bring it within legal bounds.

Mr. McGregor. Thanks you very much.

Mr. Dondero. Off the record.

(Discussion off the record.)

Mr. Larcade. The gentleman from Missouri, Mr. Magee.

Mr. Magee. Mr. Wilkes, you are greatly concerned about precedents. I think perhaps you remember that before TVA the private power companies were buying power at Muscle Shoals for 2 mills a kilowatt-hour and selling it just across the river in Florence, Ala., at 10 cents, which is a profit of 4,800 or 4,900 percent, so it is a pretty bitter pill to you now, is it not?

Mr. Wilkes. Let me tell you about the facts in this case. The companies down there tried for many years to get a firm contract to buy that power. That power would have cost on a firm basis $13 a kilowatt a year. That was the going price of electricity—what it cost to make it. They bought it for 2 mills as a dump proposition on a 30-day basis, which could be taken away from them. They had to go ahead and build their own steam plants, and the reason they took it from the Government at all was to try to be a good neighbor and prevent the waste of their power that was there at Muscle Shoals. The Government could have sold that power to the southern companies at any time they wanted to on a firm basis for more money than they are paying for power out in Bonneville now. It was not the companies' fault. The companies could not use it to good advantage. It was not worth anything but the amount of coal that they would have to burn in their own plants, because they had to have their own plants to pull their load. So the only thing it could be worth to those companies was what it cost for the fuel that it would have burned in their own plants. I do not see anything wrong with that.

Mr. Magee. You take the position that the Federal Government is holding the club over you, that they have got you all scared to death. However, your good friend, the Wall Street Journal, came out with an article stating that in the first quarter of 1950—I am talking about the private electric companies all over the United States—your earnings were 11 percent above what they were for the corresponding quarter of 1949.

Mr. Wilkes. You are talking now about something like this: You take a steer and fatten him up, and he is going to get killed, just the some as your power companies. We are well operated. I think I know as much about running a utility as the average president, and we are prosperous, just like America is prosperous. That does not prevent us from being afraid the ax is going to fall on our necks at any time unless this Congress prevents the socialization of our industry. We do not have to go any farther across the pond that England and see what has happened over there. Certainly the citizens of England have not benefited by taking over the utilities, because they have got a black-out all over England. The only place there has been a shortage of power in America has been where the Federal Government has moved in. All during World War II there was not any

shortage except in the TVA area and in the Pacific Northwest. We are now in another emergency, and again you find the same thing.

Mr. MAGEE. Well, I got hooked up with REA and it took me 4 years and 8 months after I paid my fee before I got electricity, because the private power companies would not let us have the power.

Mr. WILKES. What State?

Mr. MAGEE. When you start talking about building steam plants, you offered us contracts——

Mr. WILKES. What State was that?

Mr. MAGEE. Missouri. It was an outrageous contract. It was a thieving contract.

Mr. WILKES. I know nothing of the source up there in Missouri, but that did not exist all over the United States. I think if you look into it they were never refused power up there, except one or two places where the REA bought power from a municipality and the municipality told them they could not have additional power because the municipality was not in a position to expand its services. I do not think you would find any cases where any operating private utility company has refused to furnish electricity to these co-ops. I know of none in our territory.

Mr. MAGEE. They want to furnish it on their own terms, of course.

Mr. WILKES. Well, if you are going to sell something you want to get a return on your investment. The rates are set by your commission in Missouri. The Missouri Commission is the one who says what the rates shall be.

Mr. MAGEE. At the hearing the other day we talked about the public service commissions. I remember about 15 or 18 years ago a situation that existed with reference to the telephone company in my small town. I found that the State tax commission gave it a valuation of $16,400 on which it paid taxes, but the Missouri Public Service Commission gave it a valuation of $104,000 for rate-making purposes. That situation exists all over the United States.

Mr. WILKES. We are having a situation like that in Arkansas. The present Governor of Arkansas, I think, is trying to run for reelection on the basis of kicking the utilities around, and he is just raising our taxes to 50 percent valuation on our properties. We went around over the State and have gone to every county seat and have found out what the going rate on taxes is in the State. It is between 10 and 15 percent. If your commission ever let a utility get away with that kind of valuation, it must be because the rest of your industry and the rest of your people are also paying on that small valuation, because we certainly are the last people in the world who will ever get by with any low valuation on our properties.

Mr. MAGEE. That is all.

(Without objection, Mr. Wilkes submitted the following for the record:)

OIL AND ALUMINUM IN THE DEFENSE PROGRAM

Extension of remarks of Hon. F. Edward Hébert, of Louisiana, in the House of Representatives, Tuesday, September 25, 1951

Mr. HÉBERT. Mr. Speaker, the Nation has been saturated with the pleas of certain segments of our population for a proper and adequate defense for the protection of our national security. A vocal segment of the Nation has tried to arouse the apathetic segment to action. The success of this attempt is still rather in doubt but there is one thing not in doubt, and that is the sophistry

of a part of the vocal segment which is shouting defense of the Nation from the roof tops.

There are those who demand adequate defense of the Nation as a means of political gain and as a ruse for the further socialism of the country and the destruction of constitutional government.

This is a general charge but I back it up with two specific instances which I submit for your consideration.

Strange enough, the Department of the Interior is involved in both instances.

In one instance it is the demand for oil and in the other the demand for aluminum, but both demands are made in the name of defense, which is the popular theme song of the moment and the most appealing to an unsuspecting citizenry, which, unfortunately, remains too apathetic or distinterested to examine the record and prefers to accept catch phrases as substitute for logic.

Take the case of oil for instance.

We are told that oil is necessary in the national defense, and who can deny such a statement.

We are told that millions of barrels of oil are to be found under the tidelands of Louisiana, California, and Texas.

We are told that this oil is necessary for our defense but the oil cannot be produced unless the tidelands are stolen from the States and handed over to the Federal Government, which has no right to them, but all this must be done in the name of defense.

We are told that litigation instituted by the several States is holding up the production of this oil and naturally those who do not know the facts are convinced that the States and the House of Representatives, which shares the belief that the tidelands belongs properly to the States, are interfering with the defense program. But, in truth and fact, are they?

We are not told that the litigation could be easily eliminated by the Department of Interior acknowledging that the tidelands belongs to the States.

We are not told that if the President had not previously vetoed legislative clearance of the title of the tidelands to States, there would have been no interruption in the defense program as far as the production of oil is concerned.

The American people are not told these things because such honesty would completely remove any reason, by whatever yardstick, for the theft of the tidelands and defiance of State sovereignty.

The New Orleans States, in another splendid editorial, again rings the welkin and tears away the mask of hypocrisy from the faces of those who would cry "defense" from their throats and simultaneously shackle defense with their hands.

Who is really guilty of hampering the defense program?

Who is really the guilty party?

Read this editorial from the New Orleans States very carefully and there will not be any doubt in your minds:

"OIL AND ALUMINUM

"Among the materials vitally needed for defense purposes, oil and aluminum rank near the top.

"The demand for these two items is insatiable at this time, while the Nation is building planes, ships, and all types of armament to defend itself if global war should come, and to demonstrate such strength that our enemies would hesitate to provoke a global war.

"It would seem, then, that a major piece of business of the Government in Washington would be to boost oil and aluminum production.

"But—as unrealistic as it is—one of the administration's chief officials concerned with the production of oil and aluminum is responsible for a curtailment of their output instead of a boosting of it.

"He is Secretary of Interior Chapman.

"This newspaper on previous occasions has discussed separately his activities in the oil situation and in the aluminum situation. Because of the great importance of oil and aluminum in the present defense picture, we think the public should be aware that Mr. Chapman had a hand in throttling both of these essential materials.

"Thousands of barrels more of oil would be available from known wells in the offshore deposits of the Gulf of Mexico if Mr. Chapman's Department would choose to issue, instead of refuse, drilling permits to companies prepared to

continue operations that have been halted by the federally instigated tidelands controversy.

"The Interior Department was able to issue a drilling permit to one oil company in the offshore area on the excuse that drilling was necessary to prevent wastage. Why couldn't more permits be issued on the excuse that the defense effort needs oil?

"In the aluminum field, five plants fed by cheap hydroelectricity from tax-free, tax-supported Federal plants in the Pacific Northwest have had to cut production drastically because of a power shortage caused by drought. The Interior Department has encouraged the location of those plants in the Northwest. Mr. Chapman even went so far as to stretch the standards by which the availability of power is measured so that the Aluminum Co. of America could be enticed to locate in the Northwest instead of New Orleans.

"Until Mr. Chapman changed the standards, the availability of power had been estimated on the basis of worst year of drought in the Northwest region. The change was made to the median year—which had the effect of boosting the estimate of power available. On the basis of the new estimate, there was room for more industry in the Northwest.

"But 6 months after Alcoa had been lured to the Northwest, the median year estimate proved unsound. A drought considerably worse than the median cut short the water supply. Defense Mobilizer Charles E. Wilson is talking now about a possible shift of some of the aluminum plants to other areas.

"We don't see how our defense effort has a chance to succeed if officials like Mr. Chapman help to shape its course. His Department can take credit for putting a dent in the oil and aluminum supply."

Mr. Speaker, now there is the question of aluminum in national defense.

The production of aluminum is tied up with the question of public power. That is where the catch is.

It takes power and plenty of it to produce aluminum. There is plenty power available, especially in Louisiana, for the production of aluminum, but, unfortunately, Louisiana offers power from private enterprise and not Government subsidy. Those in power in this administration are dedicated to a vast public-power program to the destruction of private enterprise.

So what happens?

A deliberate shortage of public power is created in order to build up a demand for public power under the guise of national defense.,

Some months ago when the Alcoa people were supposed to be looking around in various parts of the country for a site to establish an aluminum plant, the people of Louisiana came forward with a sincere desire for cooperation and made every effort to interest the Alcoa people. At that time I had no reason to challenge the sincerity of Alcoa. I have learned much since.

At that time it was pointed out by me on this floor of the plot of the Department of the Interior to compel the Alcoa Co. to go to the Pacific Northwest through a tender of cheaper power through the devious channels of public power which is the admitted forerunner of socialization of our national industries. I believed then that Alcoa was strong enough to resist such pressure and would not become part of the scheme.

It is a tragedy, and not an exceptional one, that where an economic advantage is offered private enterprise, private enterprise succumbs to the temptation and turns its back upon the very people who fight the battle of private enterprise.

That is the way it was with Alcoa. They wanted to go to Louisiana as long as the Government did not offer cheaper power at public expense. Alcoa was a strong advocate of private enterprise and the principles of a free economic system as long as Alcoa could not get its own foot in the door of socialized public power, for which the people of this country pay in the form of taxation. The result was that Alcoa, after making sugary apologies to the people of Louisiana, and meaningless promises to review the Louisiana situation, raced to the Pacific Northwest to grab the Government-subsidized power to its own benefit.

It was all for defense.

It was for defense all right, but not for national defense. It was for the defense and protection of those who would march us down the road to socialism and are doing it with the aid of private enterprise itself.

The inevitable happened.

The production of aluminum today is stalemated because of lack of power in the Pacific Northwest.

Today there is no power and there is therefore no aluminum.

I find no solace or consolation in being able to say "I told you so," but I do find a burning desire within me to continue the fight of free enterprise against socialism in government and to continue to bring to your attention such virile editorials as the one to which I now invite your attention from the pages of the New Orleans States:

"DROUGHT SHORT CIRCUITS THE BUREAUCRATS

"Do you remember how the Federal Government lured a proposed $45,000,000 aluminum plant from New Orleans to the Pacific Northwest with below-cost electric power as bait?

"That was last March. The Aluminum Co. of America was looking at the natural advantages of New Orleans in picking a site for their plant—those same advantages which had just attracted to this area a $79,000,000 Kaiser Corp. aluminum plant.

"Quite probably the Alcoa Co. would have come to this area, just as Kaiser did, except that the Federal Government, through its Department of Interior, went out of its way to provide the Pacific Northwest with an arbitrary advantage that outweighed the natural advantages of New Orleans.

"That was electric power from the tax-free federally sponsored Columbia River power system at a rate below that which can be obtained from taxpaying private sources here.

"In order to offer this cheap-power bait to Alcoa, Secretary of the Interior Chapman had to strain the hydroelectric facilities that were already serving a large collection of essential industries in the Northwest.

"Part of the supply for the Alcoa plant was to be 60,000 kilowatts of interruptible power—that power which could be cut off in time of drought—from the Bonneville Dam.

"At the time that the tug of war for the Alcoa plant was going on between the Northwest area and the New Orleans area, Reporter James Free, of the New Orleans States' Washington bureau, wrote:

"Until recently, the Interior Department—figuring potential Bonneville power on the basis of worst year in the past—had stated that no additional power was available there for defense projects.

"Chapman, noting that there have been 20 normal or median years out of the past 26 years at Bonneville, changed the standard of availability from a base of the worst year to the median year.

"And, on this new basis, Chapman found that the interruptible power could be made available for defense plants.

"In other words, Mr. Chapman changed the rules so as to favor the Pacific Northwest. This newspaper was critical of his tactics, of the unfairness of the Federal Government being in business in competition with private enterprise, and of the arbitrary discrimination against the natural advantages of New Orleans.

"Now it develops that we and the defense-minded people of this Nation could be critical on another serious score. Mr. Chapman's stretching of the availability standards—changing the base from "worst" year to "median" year—has already proven to be unsound as well as unfair. The drought of the past few months has drastically reduced water in the streams on which the hydroelectric plants are located. No water means no electricity.

"The Wall Street Journal recently reported that a 245,000-kilowatt cut-back was ordered by the Bonneville Power Administration. That constituted its entire interruptible load. Affected by that cut-off are three aluminum companies—including Alcoa—whose five plants produce about 50 percent of the Nation's light metal.

"Ironically, the Bonneville Administrator was reported in the Wall Street Journal to be considering buying steam power to substitute for the hydroelectric shortage. In that area, industrial users of Government power pay 2 mils per kilowat. Steam-madep ower will cost from 8 to 10 mils, even up to 15 mills per kilowatt.

"The steam-generated power that was offered by private enterprise in the New Orleans area would have cost Alcoa 3 or 4 mills per kilowatt, thanks to the abundance of natural gas in these parts to make steam.

"The bureaucrats who have been concentrating aluminum and other essential defense plants in the Northwest without proper regard to the limitations of the hydroelectric power supply are responsible for a set-back in defense production at a time when it is vitally needed."

Mr. McGREGOR. Mr. Chairman, I ask unanimous consent of the committee to insert in the hearings a telegram and reply thereto.

Mr. LARCADE. Without objection, it will be granted.

(The documents referred to are as follows:)

HAROLD TURNER,
Ohio Power Co.,
301 Cleveland Avenue SW., Canton, Ohio:

Please advise if the Ohio Power Co. will have adequate power available for aluminum reduction in Ohio by the time such a plant could be ready to operate. This information by wire would be appreciated.

J. HARRY McGREGOR,
Member of Congress, Seventeenth District of Ohio.

Representative J. HARRY McGREGOR,
Seventeenth District of Ohio,
House Office Building:

This is in reply to your telegram of yesterday inquiring if the Ohio Power Co. will have adequate power available for aluminum reduction in Ohio by the time such a plant could be ready to operate. I am assuming a four-pot-line plant requiring between 180,000 and 200,000 kilowatts and that earliest date power would be usable would be autumn of 1952. On that basis we could furnish 40,000 kilowatts autumn of 1952, an additional 60,000 kilowatts January 1953, and remaining 100,000 kilowatts March 1953. We are enabled to provide these amounts because of program of expansion of generating facilities of American gas and electric system of which Ohio Power Co. is part, which expansion program is well under way in actual construction. The proffer is contingent to meeting construction schedules as now set up.

HAROLD TURNER,
Vice President and General Manager of the Ohio Power Co.

Mr. LARCADE. The gentleman from Arkansas.

Mr. HARRIS. May I ask the privilege of inserting a wire which I received from our Governor of Arkansas with reference to the announcement recently made by Mr. Wilson and the availability of low-cost power and fuel within our State, of the interest of the people of our State in bringing this program of industry into Arkansas?

Mr. LARCADE. Without objection, it may be filed in the record.

(The telegram referred to is as follows:)

LITTLE ROCK, ARK., *September 22, 1951.*

Congressman OREN HARRIS,
House Office Building, Washington, D. C.:

Defense Mobilizer Charles Wilson has notified the five manufacturers of aluminum in the Pacific Northwest that because of power shortages they should move their plants to the South or East where the production of aluminum can be stepped up materially. Reports from the Pacific area today state that there is every possibility of power rationing. That water shortages have delayed and curtailed production, that construction of other defense plants is being held up awaiting decisions on power supply. Today the Arkansas Public Service Commission sent the following telegram to Mr. Charles E. Wilson and to the Defense Electric Power Administration:

"The Arkansas Public Service Commission welcomes all industry possible in the defense of our Nation. We will cooperate in every way to secure maximum power for this area in the production of aluminum which is adjacent to the source of bauxite and alumina supply. The commission will issue any orders necessary or desirable to require full integration of power sources under its jurisdiction as Arkansas can produce power in unlimited quantities at one of the lowest rates in the United States. The additional security of the inland location is of great importance in this national emergency. Bauxite deposits in Arkansas have provided more than 90 percent of the entire Nation's production since the beginning of aluminum. The coal resources in Arkansas guarantee an unlimited supply at low cost. Sworn documents filed with the Public Service

Commission within the last 90 days are on record and state that there will be 1,520,000 kilowatts of thermal capacity and 614,000 kilowatts of hydro capacity in the area by June 1953. Some production is nearing completion at Bull Shoals at this time. Priorities could expedite production schedules and also increase production capacity. This commission is anxious to cooperate in the mobilization for the security of our country.

"THE ARKANSAS PUBLIC SERVICE COMMISSION,
"By SCOTT WOOD, *Chairman.*
"C. HOWARD GLADDEN, *Commissioner.*
"JOHN R. THOMPSON, *Commissioner.*"
LITTLE ROCK, ARK.

Arkansas needs this new industry and Arkansas has the greatest potential low-cost power of any State in the Union, and I urge you to use your every effort in contacting the proper authorities to assist your State in obtaining this vast industry which would bring more than a billion in new wealth to our State. We are sorely behind in obtaining any defense industry, and this is our opportunity to bring new industry adjacent to our natural resources. If I can be of any assistance to you personally, please call on me. Your acknowledgement will be greatly appreciated.

SID MCMATH, *Governor.*

Mr. WILKES. Mr. Chairman, as you know I did not have very much warning about being able to get up before this committee.

Mr. LARCADE. The committee purposely extended the hearings so as to give everybody a chance to testify. We are glad you were able to appear, Mr. Wilkes.

Mr. WILKES. I think there will probably be two or three other gentlemen, two or three other utility men, who would like to have the privilege of appearing before this committee.

Mr. DONDERO. Are they here?

Mr. WILKES. No, sir. They will be here tomorrow. I know how busy you gentlemen are. If they could have that time, I think it would be well for them to appear.

Mr. LARCADE. I should say we have an official of the Munitions Board and other witnesses who desire to appear. Without objection, the committee will stand adjourned until 10 o'clock tomorrow morning, in order that all of those who desire to appear, either for or against, may have a further opportunity to do so.

The gentleman from Arkansas.

Mr. HARRIS. Mr. Chairman, I would like permission to extend and revise my remarks.

Mr. LARCADE. Without objection, it is so ordered.

Does the gentleman from Washington, Mr. Jackson, have any statement to make?

Mr. JACKSON. Mr. Chairman, I can make the statement tomorrow. I was just going to make a point with reference to the fact that this bill is not intended as a precedent for the entire United States. A reading of the bill makes it clear that it is limited to the Northwest.

Mr. DONDERO. It does establish the principle, however.

Mr. JACKSON. That was established, Mr. Dondero.

Mr. MCGREGOR. Would the author of the bill be willing to accept an amendment that would confine it to the area of the Northwest?

Mr. JACKSON. Let me state this. I am sure that Mr. Wilkes or his attorney upon reading the bill will know that it is limited to the Pacific Northwest. I would be very willing if the committee so desires that there be a statement in the report that this is not to be construed as a precedent to establish steam plants elsewhere in the United States.

Mr. WILKES. Mr. Chapman in his statement here in the record made the statement that he was going to do it. He was going into other parts of the United States.

Mr. JACKSON. This is my bill. I introduced the bill.

Mr. MCGREGOR. My good friend knows that the only way to definitely protect our seemingly agreed position would be to put it in the legislation, rather than to make a statement in the report showing the intent of Congress. Let us amend the bill so that the intent of Congress can be clearly shown.

Mr. JACKSON. Of course, you can put it in, but I never heard that in the drafting of a bill, I will say to my good friend from Ohio, that you state in the bill that "this bill is not to be a precedent for another bill." It usually is a part of the legislative history. But if he wants to put it in, it is perfectly all right. It is just a matter of draftsmanship.

Mr. DONDERO. I can conceive of the proposition coming before this same committee with another bill for six steam plants somewhere else, and the statement that "this shall not be considered as a precedent" is not convincing. You keep right on going and get exactly what you want, in spite of the language that is included.

Mr. JACKSON. My good friend knows that Congress is supreme each time it moves. It can always repeal a bill. We do not state in this bill with finality that the bill might not be changed later on. It is just a matter of intellectual honesty that it cannot be done.

Mr. DONDERO. This is the foot in the door.

Mr. JACKSON. I disagree with the gentleman. The TVA situation is pretty comparable to the problem we have in the Northwest.

Mr. LARCADE. The gentleman will be allowed to make a statement tomorrow if he so desires.

Mr. JACKSON. I wish to thank the gentleman for the courteous treatment I have received from the committee. I just wanted to clarify the record, and I wanted Mr. Wilkes to know while he is here that it is not my desire to establish a precedent to build them elsewhere. I understood that was his main point of contention.

Mr. LARCADE. Thank you very much.

The committee stands adjourned until 10 o'clock tomorrow morning, and it is the desire of the chairman to conclude the hearings on this bill tomorrow.

(Thereupon, at 1 p. m., the hearing was recessed, to be resumed at 10 a. m., Tuesday, October 2, 1951.)

STEAM ELECTRIC GENERATING PLANTS IN PACIFIC NORTHWEST

TUESDAY, OCTOBER 2, 1951

HOUSE OF REPRESENTATIVES,
COMMITTEE ON PUBLIC WORKS,
Washington, D. C.

The committee met, pursuant to notice, at 10:15 a.m., Hon. Henry D. Larcade, Jr., presiding.

Mr. LARCADE. The Subcommittee on Rivers and Harbors of the Committee on Public Works will please come to order for further consideration of H. R. 4963, offered by the gentleman from Washington, Mr. Jackson.

The first witness scheduled this morning is Mr. Robert M. Hatfield, Vice Chairman and Executive Assistant to the Chairman of the Munitions Board, Department of Defense. Is Mr. Hatfield present?

Mr. HATFIELD. Yes, sir.

Mr. LARCADE. We will be very glad to have you appear at this time, Mr. Hatfield.

Mr. DONDERO. Mr. Chairman, I thought it was the understanding that the opponents of this bill would have yesterday and today to present their case, and I do not know Mr. Hatfield's position on the bill, but if he is one of the proponents representing the Government I think he should stand aside until the other witnesses who are opposed to the bill have their say.

Mr. MAGEE. Will the Chair yield? I think he is opposed to the bill.

Mr. LARCADE. Will the gentleman indicate whether he is for or against the bill?

STATEMENT OF ROBERT M. HATFIELD, VICE CHAIRMAN AND EXECUTIVE ASSISTANT TO THE CHAIRMAN OF THE MUNITIONS BOARD, DEPARTMENT OF DEFENSE

Mr. HATFIELD. The Department of Defense's position is pretty clearly covered in Assistant Secretary Edwards' letter to you, Mr. Larcade, in which we state that the Department of Defense has no objection to the enactment of this legislation, and at the invitation of the committee will provide a witness. I am here to elaborate on that statement.

Mr. DONDERO. Then you would be in favor of the bill?

Mr. HATFIELD. The Department of Defense is eager to have power in the Northwest by whatever means we can, and I cannot see how we would be opposed to the bill. Perhaps there are better ways to do it. The only thing we can say is we have no objection to the bill.

We recognize the responsibility of the Department of the Interior to determine in which method the power will be provided.

Mr. DONDERO. You are a Government witness?

Mr. HATFIELD. Yes, sir.

Mr. DONDERO. I think under those circumstances, the gentleman has filed his statement for the record and made known his position, so that we can go on with the witnesses whe are here, and who came from long distances and who are in opposition to the bill.

Mr. LARCADE. Is that all?

Mr. DONDERO. That is all.

Mr. SMITH. Mr. Chairman.

Mr. LARCADE. The gentleman from Mississippi, Mr. Smith, is recognized.

Mr. SMITH. Not that it makes a difference, but we have had 2 days of opposition to the bill and 2 days for it. Why can we not balance it off today?

Mr. DONDERO. I did not understand the opposition did have 2 days.

Mr. SMITH. I was here 2 days when people talked in opposition to the bill. I am not taking any position on it, but I am tired of this rigmarole about who is for it or not.

Mr. DONDERO. I think there are witnesses for and against the bill today.

Mr. SMITH. That is what I say. Let us balance it off.

Mr. DEMPSEY. How long will you take?

Mr. HATFIELD. It will only take a few minutes and I would certainly hope I would be given an opportunity to present the statement this morning.

Mr. DEMPSEY. I think we ought to hear it.

Mr. HATFIELD. I am pleased to appear before you to offer the views of the Munitions Board and the Department of Defense on H. R. 4963. I regret that the short notice of this hearing has not made it possible for me to submit this statement in advance.

Power is urgently needed in the Pacific Northwest for the production of aluminum and magnesium for the defense program. There is, at present, a serious shortage of such power, and, therefore, the Department of Defense is extremely interested in any proposal that will increase the power supply in the area.

We had expected a production of about 60 million pounds of aluminum per month in the fourth quarter of 1951 from the plants located in the Pacific Northwest. This represents approximately half of the total aluminum production scheduled for the entire country during this period. We had also expected a production of 1½ million pounds of magnesium per month in the fourth quarter from this same area. The power shortage in the Northwest has already resulted in the loss of about 36 million pounds of aluminum per month and will shortly result in the loss of 1,500,000 pounds of magnesium per month.

With our accelerated production plans, the loss of these two critical materials will inevitably result in serious delays in our military production program. It is for this reason that the Department of Defense endorses any steps which will result in providing additional power in this critical area.

The Department of Defense through the Munitions Board has consistently recommended the installation of additional power generation in the Pacific Northwest for the past several years. As recently as

September 6, 1951, we wrote to the Honorable Mon C. Wallgren, Chairman of the Federal Power Commission, urging that prompt consideration be given to two projects for which license applications had been submitted to the Federal Power Commission. We felt that since the city of Tacoma's Cowlitz River project and the Portland General Electric Co.'s Pelton Dam project would bring in an additional capacity of 580,000 kilowatts in time for the 1953–54 season, immediate favorable consideration should be given to these projects and urged prompt action on the part of the Federal Power Commission.

We have also sponsored the approval of a 220,000-kilovolt transmission tieline between Oregon and northern California which would make an additional 100,000 kilowatts of capacity available to the Pacific Northwest in seasons of low water.

Another possible solution to the power shortage is the construction of fuel-powered steam generating plants. However, the timing as to when construction should actually begin brings up the very serious problem of obtaining sufficient quantities of fuel oil, as well as the necessary critical materials for the proposed power plants without disrupting other phases of the defense effort. The use of fuel-oil-fired units would throw considerable load on the extremely short petroleum supply on the Pacific coast. This supply, at present, is so inadequate for present demands that 10,000 barrels of crude oil per day are required to be imported from Borneo. The Department of Defense recognizes the fact, however, that the actual resolution of these problems rests in the first instance with the Department of the Interior.

Finally, in principle we have no objection to the granting of the authority contained in the proposed bill. The timing for the actual construction can still be examined more closely as the situation develops and appropriations are actually requested under the authority contained in this bill. The Department of Defense feels that some solution to the power shortage in the Pacific Northwest must be found at the earliest possible moment.

Mr. LARCADE. Are there any questions by the gentlemen on my right? Does any gentleman on my right desire to question the witness?

(No response.)

Mr. LARCADE. Does any gentleman on my left desire to question the witness?

Mr. MCGREGOR. Mr. Chairman, I would like to ask a question.

Mr. LARCADE. The gentleman from Ohio.

Mr. MCGREGOR. Mr. Hatfield, in designing modern efficiency boilers, is it not necessary for you to determine the type of fuel before you start the designing?

Mr. HATFIELD. Well, the design is influenced by the type of fuel you burn, that is correct. You lose capacity if you put in a gas- and oil-fired unit and try to use coal or solid fuel. By the same token, if you design a coal-fired boiler it perhaps would not operate too satisfactorily, let us say, on waste wood or something like that. Definitely you must consider the type of fuels in designing the steam generating unit.

Mr. MCGREGOR. You have commented on the critical oil situation in that area. You are probably familiar with the testimony here

relative to waste wood for fuel? Could you depend on waste wood, or hog fuel, for the steam generating plant?

Mr. HATFIELD. I know the lumber interests in the Northwest resent very much the use of the words "waste fuel." They do not consider it a waste, but a hog fuel—a definite product that they use now. I doubt if you could get sufficient quantities of hog fuel to operate four or five hundred thousand kilowatts of power. They are utilizing their waste or hog wood now to generate steam. The city of Eugene already generates power from hog fuel.

Mr. MCGREGOR. Then from the information that you have from an investigation of that area you would question very much whether you would have sufficient hog fuel for these steam plants?

Mr. HATFIELD. Certainly there would be not a sufficient supply to produce the quantity of kilowatts that are required in the area. I think it would be a mistake to depend on hog fuel to generate the power.

Mr. MCGREGOR. You say you would question the feasibility of oil and you would question whether you have sufficient hog fuel for it, so if they are going to build these plants, how do you think they are going to obtain the fuel, and what is the fuel going to be?

Mr. HATFIELD. Well, there are several possibilities. You could design units for solid fuels. As I understand it, there are coal deposits in the Northwest. I am not too familiar with the quantities or the transportation problem involved. We feel in the Department of Defense that since the Department of the Interior has under its general jurisdiction Solid Fuels and the Petroleum Administration for Defense, and Power, certainly they would have to tie the transportation of solid fuels and the availability of gaseous fuels in with their design of the steam plant. It is a problem. There is no question of it. I am sure it is being seriously considered.

Mr. MCGREGOR. And it should be determined before the design is completed, and it would really have to be, would it not? That is, whether you are going to use coal or hog fuel or oil or gas?

Mr. HATFIELD. You could design your steam-generating units to operate on gas, oil, or coal. It would make the unit a great deal more expensive than if you designed it for gas or oil, but there are a number of steam plants in California now burning gas and oil, and which are designed to burn solid fuels in the event the oil shortage becomes more acute.

Mr. MCGREGOR. Mr. Chairman, I would like to read into the record this morning an article appearing in the Washington Post. It reads as follows:

RAINS RESTORE POWER FOR ALUMINUM PLANTS

PORTLAND, OREG., October 1 (AP).—The Bonneville Power Administration announced today that interruptible power would be restored immediately to the Pacific Northwest's aluminum industry.

A week end of soaking rains had filled up the region's power dam reservoirs and generations in the Pacific Northwest hydroelectric pool were turning at maximum efficiency.

Excess water even was flowing through the spillways of Grand Coulee Dam in Washington.

That is all, Mr. Chairman.

Mr. MACK. Will the gentleman yield to me?

Mr. LARCADE. The gentleman from Washington, Mr. Mack.

Mr. MACK. Longview, where one of these steam plants is to be established, is in my district. The power shortage there is quite critical. Longview is presently the largest lumber-manufacturing community in the United States, so at Longview it would be economical to use wood fuel or hog fuel, in any steam plant located there. The same would be true at Coos Bay, which is the largest logging or lumbering community in the State of Oregon. At Bremerton, where the third plant is to be established, it would be impractical to use hog or wood fuel because there is no lumbering in volume in that area. I know that at Grays Harbor, Wash., and Eugene, Oreg., that the steam-electric plants there do and nearly always have operated on wood fuel. These plants also are equipped to use oil. The plant at Grays Harbor has operated on hog fuel and wood fuel for 50 years. Only when there were lumber-mill strikes or closure of the mills due to other reasons is oil used.

They found oil a much more expensive fuel than hog or wood fuels. Wood fuel is probably the cheapest fuel in those particular areas where there is a large lumbering and logging business.

Mr. LARCADE. Are there any other questions by the gentlemen on my left?

Mr. WOOD. Yes, Mr. Chairman.

Mr. LARCADE. The gentleman from Idaho, Dr. Wood.

Mr. WOOD. Last Saturday morning I, with other Congressmen from the Pacific Northwest, practically all of them, including Mr. Mack and the Senators from the Pacific Northwest, attended a joint committee hearing going to this steam plant. Incidentally, it was not the reason for the telegram which was sent out looking to the advisability of moving the western aluminum plant. Dr. Paul Raver at that time made the statement that up until last Saturday morning on account of the cut-back in interruptible power there had been a shortage of 1,500 tons in the production of aluminum in the Pacific Northwest, which amounts to 3,000,000 pounds.

The witness this morning made the statement that the loss already in production of aluminum amounts to 36,000,000 pounds of aluminum. Now, I would like to know the reason for the discrepancy between those two figures.

Mr. HATFIELD. Did you want to comment on that, Dr. May? Dr. May is from our Light Metals and Nonmetallic Minerals Division in the Munitions Board and is a great deal more qualified to answer questions regarding these figures than I am.

Mr. LARCADE. Dr. May may proceed.

STATEMENT OF DR. TIMOTHY C. MAY, CHIEF, THE LIGHT METALS AND NONMETALLIC MINERALS DIVISION, OFFICE OF MATERIALS, MUNITIONS BOARD

Dr. MAY. When they first started to talk about this cut-back, Mr. Wood, in power in the Pacific Northwest area, the aluminum industry was to take a cut of approximately 236,000 kilowatts. That was to be followed later on by a second cut-back of approximately 150,000 kilowatts. The figure which Mr. Hatfield gave you was based on the cut-back over the fourth quarter, which is different from the figure which you submitted as a result of your conference up in that area.

Mr. WOOD. Would not the fact of the filling of the dams by the present heavy rains in the watershed of the upper Columbia change those figures inasmuch as there is no power shortage now?

Dr. MAY. I am not qualified to speak as to whether or not there is a power shortage at the present time, Mr. Wood, but it would cause a change. Yes. That is correct.

Mr. WOOD. That is all, Mr. Chairman.

Mr. LARCADE. If that is all, Doctor, thank you very much.

Do any other gentlemen desire to question the witness?

Mr. JONES. Yes.

Mr. LARCADE. The gentleman from Alabama, Mr. Jones.

Mr. JONES. I would like to have you comment briefly on the power situation in the entire United States, if you would care to.

Mr. HATFIELD. We have several power-shortage areas in the United States, Mr. Jones. We in the Munitions Board have expressed concern, speaking for the Department of Defense, on a temporary shortage in the Houston area. Also, the southwest portion of the United States in my opinion has a power-shortage area. Most of the figures we have, of course, have been prepared by the Defense Electric Power Administration. They do call our attention to shortage areas and solicit the endorsement and aid of the Department of Defense in accelerating construction of a number of important power plants. I think it is a safe statement to say that we have pending possible power shortages in four or five of our critical production areas; nothing as short as exists in the Pacific Northwest, however.

Mr. JONES. How about the New England States?

Mr. HATFIELD. We have had no indication from the Defense Power Administration of any power shortage pending in the New England area.

Mr. JONES. Now will you tell us the areas in the United States where there is surplus power.

Mr. HATFIELD. I am not qualified to answer that, sir. I do not know.

Mr. JONES. I am not talking about potential, but of existing production.

Mr. HATFIELD. We are not notified of any comfortable condition. We find in the Department of Defense most of our information that is given to us is because of a critical situation, where they are soliciting our aid. We are not usually notified when they have something that is comfortable unless we are considering the location of new defense facilities.

Mr. JONES. That is the only time you have occasion to look into an area and see what the power situation is, and that information is furnished to you by the Defense Power Administrator. Is that correct?

Mr. HATFIELD. That is correct.

Mr. JONES. So you do not make independent surveys or studies of any particular areas, but channel your requests to the Defense Power Administration?

Mr. HATFIELD. That is correct.

Mr. JONES. Thank you.

Mr. FALLON. Mr. Chairman.

Mr. LARCADE. The gentleman from Maryland desires to ask you a question.

Mr. FALLON. Could the shortage in power-short areas be caused by industry moving out of areas where the power costs more and moving to areas where the Government is generating power which is cheaper, and thereby overloading the areas which have the cheap power, and then creating a shortage in that area? For instance, as an example, some industries have moved out of New England down to the South in the TVA area, where the power is much cheaper. So, in time to come, in the Tennessee Valley Authority area, there will be a shortage because of the attraction of the industries from the North to the South because of the cheap power there.

Do you not have that continued condition in the Northwest?

Mr. HATFIELD. I think unquestionably the cost of power influences the location of some defense plants. I call your attention to the fact that it takes 10 kilowatts to produce a pound of aluminum. So, you can see how very important it is for the aluminum and magnesium industries to locate in a cheap power area. Otherwise, the cost of aluminum would be prohibitive. Certainly the general tendency for locating production plants is to seek a low-cost power area, particularly where power is an important item in the production of the equipment they are building.

Mr. MCGREGOR. Will the gentleman yield for a question?

Mr. LARCADE. The gentleman from Oregon, Mr. Angell, asked for recognition, if you do not mind.

Mr. MCGREGOR. I am sorry.

Mr. ANGELL. Mr. Hatfield, I come from the Portland, Oreg., district and I was talking to people in my district last night. It is true there was a heavy rainfall in that immediate vicinity and I understand some rainfall in the Columbia River watershed. Just how effective it is in relieving this power shortage, of course, is problematical as yet. It is true, though, is it not, that these plants are not to relieve this particular shortage at the present time because it would take perhaps a year and a half or 2 years to build the plants?

Mr. HATFIELD. That is correct, sir.

Mr. ANGELL. The purpose of these plants is to provide stand-by power in the event of an emergency such as this, where there is a water shortage, and to firm up the power of large hydroelectric projects such as the Bonneville Power Administration is administering?

Mr. HATFIELD. That is right. The fact that there is rainfall there and there is no curtailment of interruptible power now in the Northwest in no way changes the position of the Department of Defense. We still urge that immediate steps be taken to provide additional power in the Pacific Northwest for the very reason you pointed out.

Mr. ANGELL. It it your understanding that stand-by plants as adjuncts to hydroelectric power development are essential and economical in the long run?

Mr. HATFIELD. I would think in any place where you have seasonal rains and you have firm power commitments, some provisions must be made to take care of those loads during the law-water periods.

Mr. ANGELL. It is true, is it not, that private utilities provide stand-by plants for that purpose with steam generation, usually.

Mr. HATFIELD. I did not get your question, sir.

Mr. ANGELL. It is true, is it not, that private utilities also provide stand-by plants to firm up hydroelectric power in an emergency?

Mr. HATFIELD. Oh, I am sure of that.

Mr. ANGELL. Is it not your view that the real permanent answer to this whole problem of power shortage is speeding up the construction of additional generators in the many plants and projects that are now in the process of development or new plants that have been approved, in the Columbia River area?

Mr. HATFIELD. That is correct, sir.

Mr. ANGELL. And, if those speed-ups did take place and this additional power was brought in, it would provide a permanent solution of this very critical problem at the present time?

Mr. HATFIELD. I think that is correct, sir.

Mr. ANGELL. I believe you stated we are getting about 40 percent of the aluminum from that area. Is that not true?

Mr. HATFIELD. That is right, sir.

Mr. ANGELL. So, it is quite essential not alone for the economy in peacetime but particularly in a time of great emergency, in war and rearmament, such as we are passing through now, to have available large blocks of hydroelectric power which can be utilized in making aluminum and the other light metals for use in the construction of war materials?

Mr. HATFIELD. Yes, sir.

Mr. ANGELL. That is all.

Mr. LARCADE. The gentleman from Ohio.

Mr. MCGREGOR. If we are building public power plants in order to help out the aluminum industry, then we are subsidizing the aluminum industry; are we not?

Mr. HATFIELD. I guess perhaps we are. Yes, sir.

Mr. MCGREGOR. That is all, Mr. Chairman.

Mr. JONES. Will the gentleman yield?

Mr. MCGREGOR. Yes.

Mr. JONES. In order to keep the record straight, Mr. Fallon prefaced his question to you a moment ago with the statement that the low rates of TVA were attracting industries of the New England States to move from the East to the TVA area. As a matter of fact, there have only been five plants in the United States that have moved from their original points into the TVA area.

As I recall, only two of those plants came from the New England States. Certainly the area where I reside, and in the TVA area generally, they are not trying to take plants away from other areas.

Mr. ANGELL. On the question of the aluminum subsidy, only about 40 percent of the hydroelectric power goes to aluminum, and the rate is maintained for all industries there. The other 60 percent get the same rate as the aluminum companies get.

Now, the average rate is 2.37 mills, which is a very low rate. Even with that low rate the Bonneville Power Administration is amortizing the cost of that entire project and is some 10 years ahead in the three-payment schedule.

So, it is not a subsidy of money coming from the United States and not a subsidy to the aluminum industry because all industry—not only the 40 percent used by aluminum, but the other 60 percent—gets the same rate.

Mr. LARCADE. Are there any further questions?

Mr. GEORGE. I would like to ask a question.

Mr. LARCADE. Mr. George.

Mr. GEORGE. Where did you produce your cheapest aluminum in the United States during the last war?

Mr. HATFIELD. Can you answer that, Dr. May?

Dr. MAY. On an average cost basis, I think it was probably at Alcoa, Tenn.

Mr. GEORGE. I thought it was in Arkansas. Did you have a plant in Arkansas?

Dr. MAY. Yes. At Jones Mill.

Mr. GEORGE. Was your production cost higher or lower there?

Dr. MAY. Of course, the plant which was at Jones Mill was a plant that was put up during the war, and I just cannot recall what the cost of the metal was at that plant.

Mr. GEORGE. Thank you. That is all.

Mr. MACK. I would like to ask a question of the witness.

Mr. LARCADE. The gentleman from Washington, Mr. Mack.

Mr. MACK. Is it the considered opinion of the Munitions Board that unless additional electrical power is provided in the Pacific Northwest the defense effort will be seriously handicapped?

Mr. HATFIELD. That is correct, Mr. Mack.

Mr. MACK. That is all, Mr. Chairman.

Mr. DONDERO. Would that apply to other parts of the United States?

Mr. HATFIELD. Wherever a power shortage developed it would be a problem.

Mr. DONDERO. Of course. That is a general statement. My good friend from the State of Washington should be a lawyer and try to refrain from leading questions.

Mr. MAGEE. Will the gentleman yield? They do not produce aluminum in every section of the United States; so, your question is out of order.

Mr. DONDERO. Well, they are trying. They have gone as far as making it down in Louisiana, where our good friend the chairman comes from.

Mr. LARCADE. Are there any other questions of the witness?

(No response.)

Mr. LARCADE. Thank you very much.

At this point, I regret to announce to the committee one of our distinguished colleagues, the gentleman from Tennessee, Mr. Baker, is seriously ill in the hospital.

(Discussion off the record.)

Mr. LARCADE. Gentlemen of the committee, these hearings have been expressly prolonged in order that the opponents to this bill and these projects could be heard, at the request of Mr. Wilkes, of Louisiana, who is in charge of the witnesses who are to appear in opposition to the bill. At this time I would like to call on Mr. Wilkes to present any additional witnesses that he desires to appear before the committee at this time.

STATEMENT OF FRANK M. WILKES, PRESIDENT, SOUTHWESTERN GAS & ELECTRIC CO., SHREVEPORT, LA.

Mr. WILKES. Mr. Chairman and gentlemen of the committee. You were all very kind to listen to my remarks yesterday. I have called several of my colleagues from the Southwest. Two companies are represented here now. They are Mr. Louis Riegel, of the Gulf States

Utilities Co.—he is vice president of that company—and Mr. Bert Ridburg, assistant to the president of the Louisiana Power & Light Co.

I have gone over with them my statement of yesterday and they have instructed me to tell the committee that they endorse the statement which I made yesterday, and in order to save the time of the committee they will not testify, unless some of you gentlemen would like to cross-examine them or ask them some questions.

I want to leave this with the committee: That we of the utility industry are not opposed to the installation of steam-generating equipment in the Pacific Northwest. We think they need it out there, and if they need it then they ought to be built, because whatever we can do for defense we want to help it be done; but the point I made yesterday, and which I want to leave with all of you, is this: For God's sake, don't build those plants so as to give a precedent to the Department of the Interior by which they can build steam plants all over the United States.

Mr. Chapman made that statement in his testimony the other day: that he was going to build them in the Southeast and the Southwest. I do not want to interfere at all, Mr. Angell, with your fine territory, but I want to ask you, please, please, do not give a precedent to the Department of the Interior that they can use.

Mr. DEMPSEY. Mr. Chairman, I would like to ask the gentleman a question.

Mr. LARCADE. The gentleman from New Mexico.

Mr. DEMPSEY. I listened to your testimony very interestedly yesterday. I called the Secretary of the Interior this morning, and he said he made no such statement, and there was nothing intended except to construct these eight plants in the Northwest.

Mr. WILKES. I looked through his testimony, Mr. Dempsey, and I will show it to you where he said it.

Mr. DEMPSEY. But he wanted me to say to this committee, and to say to you, that there is no intention to construct anything but these eight stand-by steam plants.

Mr. WILKES. Mr. Chapman, when he makes those statements, reminds me of the darky who had a catfish squirming around in the boat down on the Mississippi River. He said, "Why don't you lay still, catfish? I'm not going to hurt you. I'm just going to gut you. That is all."

Mr. ANGELL. Mr. Chairman, may I ask Mr. Wilkes a question before he leaves?

Mr. LARCADE. Mr. Angell.

Mr. ANGELL. I want to commend you for the very fine and broad-minded statement you made.

May I ask you this question? I am asking this by reason of your last statement. You are not opposed to the construction of stand-by steam plants at hydroelectric projects such as we have out there then; are you?

Mr. WILKES. Yes, sir. I am very definitely opposed to it. I take this view, Mr. Angell. I am not a lawyer, but I read my Constitution of the United States a little bit, and I do not think the Federal Government has a right to produce anything to sell in competition with its citizens.

Mr. ANGELL. Then, you would be opposed to the hydroelectric plants as well?

Mr. WILKES. No. They are different. Your hydroelectric plants in the Pacific Northwest, every one of them ought to be built, and I hope before I die I will see every water power in the United States developed. They ought to be developed. But there is something different.

When the Federal Government develops water power for irrigation, for navigation, or for flood control, and has some incidental power, then my stand is that under the Constitution they have a product there which they ought to sell in order to help pay for the dams, but when you go out and build a steam plant, or when you go out and build a factory to manufacture shoes, then you are stepping outside the Constitution, and you have no right to do it.

Mr. ANGELL. Mr. Wilkes, I am inclined to agree with you in part. Up to this point where the Federal Government has, through constitutional methods, developed hydroelectric power, as we have done in the Northwest and elsewhere, and it becomes essential to have some stand-by plants to firm up the power to be used in an emergency such as this, with maybe 30 days of low water. That, in my opinion, is a part of the whole project and should be permitted.

Mr. WILKES. I say this, Mr. Angell. If you want to do that, then what this Congress ought to do is decide to go for socialism and appropriate enough money to buy every one of us utility people out. Then you can do anything you want to do with them. But do not socialize us by indirection. And, that is what you are going to do if you open the gate just a little bit, and a little bit more, and let the Department of the Interior start building steam plants. The first thing you have is more steam plants than hydro.

Mr. ANGELL. If they do, then the Congress will be at fault for doing that.

Mr. WILKES. There is no such thing as firming up hydro with steam. You can offset it with steam. That is, you can duplicate your investment, but there is no such thing as firming up hydro with steam. It is an argument we might go into for hours.

Mr. ANGELL. Gentlemen here seemed to take the opposite view. The city of Tacoma, which is the most outstanding development of hydroelectric power at a very low rate, has steam stand-by plants to firm up power there.

Mr. WILKES. They duplicate the hydro with steam.

Mr. DONDERO. Mr. Chairman.

Mr. LARCADE. Mr. Dondero.

Mr. DONDERO. If I understand you correctly, you want private enterprise and private investment to do the job whenever and wherever possible, rather than the Federal Government?

Mr. WILKES. That is correct.

Mr. DONDERO. In answer to my able friend from Oregon in regard to Tacoma, that is a local proposition for the city to determine whether it wants its own plant and not the Federal Government. Is that not the difference?

Mr. WILKES. Mr. Dondero, you hit exactly on that. I think a city undoubtedly should have the right to put in its own plants. Tacoma has done it, and it has had a successful utility company over many,

many years. But that belongs to the people of Tacoma, and it is their money that is being risked. It is the people who are being served by that plant whose money is being risked. But I do not believe in Federal money from all over the United States being used to put any utility into it. It is an entirely different matter.

The city of Los Angeles has a plant and they built a transmission line all the way from Boulder Dam over there. It is the taxpayers from Los Angeles who did it. I think you get into a different question on the municipal ownership and the Federal bureaucracy.

Mr. DONDERO. We have had witnesses before us here in favor of hydroelectric power who said to this committee, "Relieve private industry of taxes and they can produce power just as cheaply as the Federal Government." Do you agree with that?

Mr. WILKES. I do not think there is any doubt of it. I do not want to take the time of the committee, but I would like to give you a few figures.

TVA has invested a little over a billion dollars. After they finished allocating some of it to flood control and some to navigation and some to recreation, and so forth, they have about $550,000,000 as invested capital in the power part of it. My company has roughly about $75,000,000 invested in our property. They have almost eight times as much money invested in their power proposition as we do. Last year they paid in lieu of taxes to the cities in Tennessee approximately $2,400,000. Southwestern Gas & Electric's taxes last year—that is my company—were $3,950,000.

Mr. DONDERO. On a $75,000,000 investment.

Mr. WILKES. Yes. They paid $2,400,000 on $550,000,000. On $75,000,000 I paid $3,950,000 in taxes.

Mr. DONDERO. Then if TVA paid the same proportion you did they would pay eight times as much?

Mr. WILKES. Why, of course. Again, on the interest on the money they paid last year, they paid $968,000 worth of interest, I think, on that $550,000,000 investment. My company paid 3¼ or $3,250,000 on our $75,000,000 which we have invested. That is the difference between Federal power and ours.

Mr. DONDERO. It is an unfair advantage?

Mr. WILKES. I do not think it is a very fair competition, do you?

Mr. DONDERO. Of course it is not. That is all.

Mr. WILKES. I want to thank you, gentlemen.

Mr. MAGEE. Are you worried about the taxes?

Mr. WILKES. What is that?

Mr. MAGEE. You are worrying about the taxes you pay?

Mr. WILKES. No. I think everybody ought to be willing to pay his taxes now. As a matter of defense it is all right; but when you pay it you ought to pay it all alike.

Mr. MAGEE. When you go before the public utility commissions of your respective States you put that in.

Mr. WILKES. Sure we do. Who pays your taxes, Mr. Magee?

Mr. MAGEE. So it does not make much difference how much taxes you pay. You buy political advertising all over this country, talking about creeping socialism, and you are allowed by your public-service commissions of the respective States to deduct that from your income tax, are you not?

Mr. WILKES. Everybody deducts that. Who pays your taxes, Mr. Magee?

Mr. MAGEE. I pay them.

Mr. WILKES. All right. Who pays your salary? The Federal Government.

Mr. MAGEE. But I do not deduct political advertising. I am not allowed to deduct that when I run for office.

Mr. WILKES. The same thing you are asking me applies. The Federal Government pays your taxes, so why should you be allowed anything?

Mr. MAGEE. When I carry on a political campaign I am not allowed to deduct from my taxes my political advertising. I pay it; but you folks go before the public-service commissions of every State you serve and they let you deduct your political advertising against creeping socialism.

Mr. DONDERO. My friend from Missouri makes a rather severe indictment against State governments all over this country.

Mr. WILKES. I think he does, too.

Mr. DONDERO. In other words, every Government salary is paid out of the profits that you folks produce in private enterprise.

Mr. WILKES. Yes. I do not want to say anything about the Congressman because I think he is a fine Congressman, but when anybody raises that bugaboo that we do not pay any taxes, I just want to say the Federal Government pays Mr. Magee's taxes, and I think it is the craziest thing I ever heard of, accusing us of not having the right to include our advertising in our taxes.

Mr. MAGEE. The thing that bothers you, Mr. Wilkes, is that before TVA came in you folks were making about 4,800 percent profit, and you have not been able to do that since then.

Mr. WILKES. You know better than that. You ought not to make a statement like that.

Mr. VURSELL. Mr. Chairman.

Mr. LARCADE. The gentleman from Illinois, Mr. Vursell.

Mr. VURSELL. I want to look at the other side of the picture. I think it is a fine thing and they are rendering a public service and a national service for businessmen who have the courage to make a fight against creeping socialism, and who take a chance on being discriminated against by the Government. I think they are rendering a service in helping to awaken the people to what is really happening and has been happening for months and years. I see no reason why they should not put advertising expense, because I think it is a very worthy expense to the Government. I wish there was more of it.

That is all I have on that subject.

Mr. DEMPSEY. Mr. Chairman, let us not go into next year's campaign. It is too early.

Mr. LARCADE. We will have plenty of time then. Thank you, Governor, for your observation.

Do you have anything else, Mr. Wilkes?

Mr. WILKES. The burden of our story is all the same. That is what I said. We do not want to oppose anything that is necessary to the Pacific Northwest. All we are doing is asking this committee to be sure in granting this, if you do, that you give some protection against the Department of the Interior. I know Mr. Chapman. He is a very

fine man, but he has one thing in mind, and always had it, and always will have it. That is the general nationalization of the utility industry. I do not care what he says. That is what he has in mind.

I want to thank the committee for being so nice to me.

Mr. LARCADE. Would you like to have Mr. Riegel appear and make a short statement?

Mr. WILKES. He says "No."

Mr. LARCADE. Without objection, Mr. Riegel and Mr. Ridburg, or any other interested parties, will be allowed to file a statement for the record.

I would also suggest that without objection any proponent or opponent who has not had an opportunity to testify will likewise be permitted to file a further statement for the record.

Mr. JONES. Mr. Chairman, I have one or two questions I wanted to ask Dr. Raver. I do not know if he is going to be subject to cross-examination, but I would like to ask him a question to be included in the record.

Mr. LARCADE. Who is that?

Mr. JONES. The Bonneville Power Administrator.

Mr. LARCADE. Dr. Raver?

Mr. JONES. Yes.

Mr. LARCADE. Is Dr. Raver present?

Dr. RAVER. Yes.

Mr. LARCADE. Without objection, Dr. Raver will appear for further interrogation, since he appeared as a witness before the committee already.

Is there an objection?

Mr. DONDERO. Certainly there is no objection, with the understanding that he will be subject to cross-examination on any question which may be asked now and which may not have been asked heretofore.

Mr. JONES. I believe you stated when you first appeared before the committee that some 400,000 kilowatts would be firmed up by the addition of these new plants. Is that correct?

STATEMENT OF DR. PAUL J. RAVER, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION

Dr. RAVER. Yes, sir.

Mr. JONES. Approximately that amount?

Dr. RAVER. Yes.

Mr. JONES. In your power contracts that are presently in force, will existing purchasers of that power be given a priority for firm power that is produced by the installation of the new steam generating units?

Dr. RAVER. Yes, sir. All existing customers will be given an opportunity to utilize that firm power if they want to.

Mr. JONES. In other words, suppose I am a company in the area and I am using, let us say, 5,000 kilowatts of firm power and the same amount of interruptible power. Would I be given an opportunity to purchase my ratio of firm power that is produced by these steam generating units?

Dr. RAVER. I think in general that is true. There might be a requirement of the national defense for some special industry that

would cut down on the amount that could be prorated, but outside of that it is going to be available.

Mr. JONES. But you are going to give a priority to existing purchasers rather than new industries that would come into the area?

Dr. RAVER. That is right. Except for national defense purposes.

Mr. JONES. Meaning projects which are accepted. That is the only point.

Mr. LARCADE. Are there any other questions?

Mr. DONDERO. Just one question.

Mr. LARCADE. The gentleman from Michigan, Mr. Dondero.

Mr. DONDERO. Dr. Raver, suppose a plant, following the questioning of my friend from Alabama, located in the area, and is served by one of the private utility companies, Would that private utility company be able to buy from you enough power to serve that plant, not as a top priority, but along with other industry in that area? Could they get power from you?

Dr. RAVER. They would.

Mr. DONDERO. Would he come at the bottom of the list, or would he be treated the same as the other industry would be treated?

Dr. RAVER. He would come after the preference and priority customers who have a preference for Government power in the Bonneville Act. He would also come after any firm power commitments that we now have with anybody.

Mr. DONDERO. Suppose one of the public utility bodies of the cities in the area asked for the power. They would come ahead of industry that would locate there?

Dr. RAVER. That is right.

Mr. DONDERO. If there was any power left after that then the new plant that had moved in would get it, but if there was not then the private utility company in the area would have to find some way to expand its facilities in order to take care of that plant?

Dr. RAVER. The second priority that you speak of would be only a national defense industry and, of course, that would be a first priority even ahead of the preference and priority customers, so far as the output of the steam plants is concerned, I would say the utilities would come second, after the preference customers, in the use of this power, except for national defense purposes.

Mr. DONDERO. If we did not have anything that required the national production of material, then what would you do? Would they still be second or third?

Dr. RAVER. They would still be second.

Mr. DONDERO. In other words, the public utilities, being ahead of private utilities, have the first choice under the law?

Dr. RAVER. That is correct.

Mr. DONDERO. That is all.

Mr. BRAY. May I ask a question?

Mr. LARCADE. Mr. Bray, the gentleman from Indiana.

Mr. BRAY. On the matter that has been brought up, let us say if your power is a little short do you ever call on private utilities in that area for help with additional electricity?

Dr. RAVER. Yes, sir. They help the region with their supplies to the full extent that those supplies can be used economically.

Mr. BRAY. The situation that is existing in the Midwest is this: I know it is beyond your area, but you might be able to throw some light

on it. In Indiana I believe that we have all private power. It is all gained from coal in the State. We have practically no water power. Yet time after time we have to provide power for TVA. In fact, something like 10 times as often as they ever helped provide power to the private utilities.

A few months ago it was contemplated building a plant in Indiana—without going into the details—which would consume a considerable amount of electricity. There was sufficient electricity being produced by private power in Indiana to take care of that plant, but they were not allowed, as I understand it, to have that industry there, because they had to have a certain amount of stand-by power to take care of the TVA area. Yet they placed this factory in the TVA area and would not allow it to be placed in the private power area because the private power had to maintain a certain surplus to take care of stand-by for TVA.

Do you know anything about that sort of a ruling?

Dr. RAVER. No.

Mr. BRAY. That is all.

Mr. LARCADE. Are there any further questions by the gentlemen on my right?

Mr. STEED. Yes, sir.

Mr. LARCADE. The gentleman from Oklahoma, Mr. Steed.

Mr. STEED. Doctor, after these steam plants are in operation and you firmed up some of your power, how much interruptible power would you have left, would you say?

Dr. RAVER. May I ask our chief engineer the answer to that question?

STATEMENT OF SOL SCHULTZ, CHIEF ENGINEER, BONNEVILLE POWER ADMINISTRATION

Mr. SCHULTZ. Would you repeat the question, please?

Mr. STEED. After these steam plants have been completed and are firming up this amount of your power, how much interruptible power would you have left for sale?

Mr. SCHULTZ. The amount would vary with the duration that is available. This steam would firm the interrupitible power that would be available down to the point of about 60 percent of the time. Do I make that point clear? Power that would be available from the hydro system 60 percent of the time could be firmed up by this additional steam to become 100 percent power. Below that 60 percent level we still have interruptible power, but that reaches the point where it would be available such a small portion of the time that it would be usable only for random purposes, such as interconnections to places outside the area, and the like.

I wish to make sure I am answering your question.

Mr. STEED. What is the precent of your power now that you call firm and that you call interruptible under your present production?

Mr. SCHULTZ. At the present time with the total capacity on the system we have a total firm capacity of about 1,467,000 kilowatts. That is firm power, 100 percent of the time. It is power that is available in a dry year:

We have power in a continuous year that would be available to the extent of about 1,800,000 and some odd kilowatts on a continuous

basis. That is with average water. So the difference between those two is about 370,000 kilowatts of what we consider the interruptible or secondary power.

Mr. STEED. Is this recent shut-down the first time you actually had to interrupt your customers?

Dr. RAVER. No. We have interrupted them as a part of our normal operations in the past. That is the purpose of an interruptible contract. At this particular time of the year you do not know whether you are going to have good water or bad. It is right at the tail end of the melt of the snows in the mountains. We have not had rain for quite a period of time in the summer and your stream flows are declining.

During that period the reservoirs are held until we can determine whether the stream flows are going to rise or go down. If they continue to go down because of drought or freezing up in the watersheds, then we are in a critical water situation and we have to draw on our reservoir to protect the ratio.

At this time of year we are always faced with that management problem. It is a management problem not only from the point of view of Bonneville, but all of the utility operators in the Northwest who are tied in with this operating pool.

During that period steam is operated to hold reservoirs until such time as rains come and you can turn the steam off again. In that period we cut down or shut off the interruptible loads that we have under contract in order to reduce the amount of steam burned in the area to a minimum.

Mr. STEED. That is all, Mr. Chairman.

Mr. ANGELL. Mr. Chairman, may I ask a question?

Mr. LARCADE. Mr. Angell.

Mr. ANGELL. Dr. Raver, the prevailing rainstorms we have in the Northwest at the present time, have they relieved the shortage?

Dr. RAVER. Yes. We are planning to put some of the pot lines back on just as quickly as the aluminum companies can restore them to operation. We have told them we can keep them on for at least 3 weeks. We know we have enough water now to do that. They may have to shut down again at the end of the 3-week period. We are not out of the critical situation, at least so far as we can tell, more than for a temporary period.

Mr. ANGELL. I called my district long-distance phone last night and they said the rain was pretty heavy over the last 3 days. Does that prevail pretty much over the Columbia River watershed?

Dr. RAVER. That is right. It shows how fast the picture can be changed in this particular area. We have added about 500,000 kilowatts out of these rains.

Mr. DONDERO. Maybe the Great Lord is making it unnecessary for us to build these steam plants.

Dr. RAVER. If we could depend on Him every year it would be very nice.

Mr. VURSELL. Can you give us an estimate of the power being produced by private utilities now in the Pacific Northwest, particularly by steam plants?

Dr. RAVER. The total steam in the Pacific Northwest in the western pool is about 300,000 kilowatts. I think the private companies have in the neighborhood of 200,000 or somewhere in that proportion.

Mr. VURSELL. Do you think it would be wise to encourage the expansion there of these privately owned utilities?

Dr. RAVER. Yes, sir. We have discussed this whole problem thoroughly with them a year ago and continuously during this past year. The situation, of course, is simply this: We are operating a pool operation over a very large region and the major power supply in that pool comes from the Federal Government.

The Federal Government's supply is about half of the total generating capacity of that pool. Out of that pool, through our transmission grid system, we have integrated all of the operating utilities of the region that have generating capacity in their systems. So we get the maximum utilization of water and the minimum utilization of steam in that pool operation, regardless of who owns it. Then they make their financial adjustments between themselves.

For any one of those utilities, either a public or a privately owned utility, to undertake the problem of firming up the pool means that they take a financial investment on themselves for the benefit of the whole pool, which none of them are willing to take individually.

Mr. VURSELL. I can quite understand that. Might there not be involved in it the very threat of the constant expansion of government in power which would make bad investments and not give a good future outlook to private investments? Do you not think that has something to do with it?

Dr. RAVER. I think it has, and I want to assure you that, so far as the Federal Government is concerned in our administration out there, we are attempting to work out by contract the place of each of the groups of customers in this pool operation so that they will be able to do that portion of the job which is economically sound and feasible for them to do; and, incidentally we are trying to do that portion of the job that is economical and feasible for the Government to do.

I want to state, in connection with that, that anyone who does not understand the Northwest picture will get it mixed up with pictures all over the rest of the country. The Northwest situation is unique in this country, and it is unique for this basic reason: There is no other watershed that I know of in this country that has the firm power capacity for economic development of electric energy that the Northwest has. That is the basic problem. If that great water system is to be controlled, as it must be, for flood control, irrigation, and navigation purposes out there, there is only one way to get it controlled, and that is for the Government to step in, as Mr. Wilkes said, on the basis of navigation, or flood control, or irrigation, and to build those great dams. The energy base of that region depends on that being done. The whole future of their economy depends on it being done.

Mr. VURSELL. If I may interrupt you at that point, for the purpose of brevity, I have only one other question I want to ask.

I agree very much along the lines of your last statement, but what I would like to know is whether or not this is an exceptional drought that has brought about this present situation, or whether you have had in the past the same sort of a situation?

Mr. RAVER. We have had the same sort of situation in the past. It is more critical this year than it has been since I have been in the Northwest. As I explained a little while ago, in this particular period of the year we have always had, from a management point of view, to

hold reservoirs and burn steam until we could see how we were coming out for the entire region. That could be corrected only by the establishment of steam plants to firm up power, and additional storage of water upstream, which is a part of our program also over a long-range program, and the bringing in of new firm power hydro supplies by both public and private industry.

Mr. VURSELL. That is all, Mr. Chairman.

Mr. LARCADE. Are there any further questions by members of the committee?

Dr. RAVER. May I close on this emergency matter with a statement? I just wanted to make it clear, as I think I tried to point out, that we are not building these steam plants just to have something to tide us over in an emergency. We are building them from the point of view of the long-term investment program of firming up power supplies in this region. The fact that it can be used for the emergency remains, and it should be used for that purpose, but I do not think we should make investments any place on an emergency basis where and if we can make those emergency investments usable for peacetime purposes. These steam plants are for both purposes.

Mr. ANGELL. Mr. Chairman, to make it clear in the record, I understand from your testimony, Dr. Raver, it would not be economical for private utilities to build these stand-by plants for the use of the pool there in the Northwest?

Dr. RAVER. No, because steam plants are expensive. Taken by themselves they are expensive if put into a single system. But when you average the cost over an entire region through a pool, nobody is hurt. That is about what this comes down to, simply.

Mr. DONDERO. Just one or two questions, Dr. Raver. If I have asked these questions before and if you have answered them we will waive them.

Do you anticipate your rates will go up after these steam plants are built?

Dr. RAVER. Not as a result of the steam plants. We anticipate in 1954 we will have to make a rate adjustment because of the great increase in costs of the new dams that will be coming into our system.

Mr. DONDERO. That is the increased cost of machinery?

Dr. RAVER. That is right. The steam plants, as I indicated to you in my testimony, were stopped at 400,000 kilowatts, and one of the reasons why we stopped at 400,000 kilowatts was that that was the breaking point in the economic acceptability of the rates. That would be a slight increase there, but it would be very minor.

Mr. DONDERO. Can you foresee any future demand for the building of any other steam plants at this time?

Dr. RAVER. I hesitate to say because I do not know. We do not foresee it for a good long period into the future anyway, if our hydro program continues, and particularly if other smaller developments go ahead, which we are in favor of out there.

Mr. DONDERO. As between Government power and private power, the Government fixes your rates; that is, the Federal Power Commission and the State commissions fix the rates for private industry.

Dr. RAVER. That is correct.

Mr. DONDERO. How do those two rates compare?

Dr. RAVER. Of course, the rates that are fixed by the State commissions are retail rates. In other words, they are the rates to the

ultimate consumer. We are a wholesaling agency and our rates are the rates at wholesale to the private and public agencies who buy our power.

Mr. DONDERO. If a private power company sold at wholesale, would that be a comparable rate with your rate?

Dr. RAVER. I think it would probably be a higher rate at wholesale. Just what it costs them on the average to produce power and deliver it by transmission to their load centers I am not competent to say, but I suspect the costs would be in the neighborhood of twice what our costs are.

Mr. DONDERO. You mean private companies would have to pay double, or would have to charge a plant double what you would charge it?

Dr. RAVER. You are asking about the wholesale cost of power.

Mr. DONDERO. The wholesale cost for the private industry.

Dr. RAVER. Our wholesale cost is about 2.3 mills, and I would imagine their wholesale cost is in the neighborhood of 4 or 5 mills. I do not know just what the total is. It depends on how much hydro they have in their systems. However, it is somewhere in that neighborhood, I would think. Then that forms the basis of the total cost of power to them. They get a certain amount of our power and have a certain amount of their own, and that goes into their cost when they appear before the State commission for fixing the rates at retail, and the retail rate, of course, is much higher, because they have the cost of distribution of that power to each individual customer.

Mr. DONDERO. Of course, that competition drives the customer to public power rather than private power.

Dr. RAVER. Well, the public power people pay the same wholesale rate for power that they buy from the Government as the private companies do, and the public agencies themselves have some generation of their own which is a higher cost than ours.

So that the comparison between what it costs a public agency to operate, based on the cost of their power, and what it costs the private utility company, is probably pretty close.

Mr. DONDERO. Are any of the private companies in the Northwest expanding?

Dr. RAVER. The Pacific Power & Light Co. is installing a new generating plant on the Lewis River, called the Yale plant, which will be in production next spring and will add about 550,000,000 kilowatt-hours to the pool and to their own resources. The Washington Power Co. is constructing a new hydro plant on the Clark Fork at the border line between Montana and Idaho, which will have a capacity of 200,000 kilowatts.

Mr. DONDERO. Is that outside of your area?

Dr. RAVER. No.

Mr. DONDERO. It is inside of your area?

Dr. RAVER. That is right. They have plans for two additional dams above Cabinet Gorge on that river, and the Pacific Power & Light Co. has plans for an additional dam above the one they are building now. The Portland General Electric Co., as you know, has an application to build a plant on the Deschutes River in Oregon but is waiting for a permit from the Federal Power Commission. The fish problem is involved in that. The Idaho Power Co. has two dams

under construction on the Snake River. The Montana Power Co. has just installed a new steam plant outside of our area, but we serve the Montana Power Co.

Mr. DONDERO. Is all of that developed within the area that public power could serve?

Dr. RAVER. Yes.

Mr. DONDERO. Are your transmission lines built out as far as that, so that you could serve them?

Dr. RAVER. That is right.

Mr. DONDERO. Will they buy power from you to go into that pool?

Dr. RAVER. That is right.

Mr. DONDERO. Will they sell power?

Dr. RAVER. Our transmission system makes it possible to get the maximum economy out of their plants by integrating their supply with ours and firming up to that extent their own power supply.

Mr. DONDERO. That is all, Mr. Chairman.

Mr. LARCADE. Any further questions by any gentlemen of the committee?

(No response.)

Mr. LARCADE. Thank you very much, Dr. Raver.

Is there any person present in this room who desires to testify in opposition to the bill under consideration by this committee, H. R. 4963?

(No response.)

Mr. LARCADE. Is there anyone present who desires to testify further in favor of this bill now under consideration by this committee, H. R. 4963?

(No response.)

Mr. LARCADE. If not, the committee will suspend.

(The following telegrams were submitted by Congressman Mack for the record:)

CATHLAMET, WASH., *October 2, 1951.*

Congressman RUSSELL V. MACK,
1318 House Office Building, Washington, D. C.:

Approve H. R. 4963, authorizing BPA to construct three steam plants and five gas-turbine plants in Northwest. Object to section 3–D giving Secretary of Interior power to fix rates. Firmly believe all rates for electricity produced and sold by Federal Government should be approved by Federal Power Commission as at present. Also object to infringement on preference for public bodies as provided in section 3–B, lines 3 to 8, inclusive, on page 3. Suggest amendment of these two provisions before passage of bill.

JOHN S. DICKSON,
Manager, Public Utility District No. 1, Wahkiakum County.

SEATTLE, WASH., *October 1, 1951.*

RUSSELL V. MACK,
Member of Congress,
1318 House Office Building, Washington, D. C.:

Urge favorable committee action H. R. 4963, authorizing fuel fire generating plants in Northwest. Such plants no substitute long-range hydro program but needed for defense effort protection against reoccurring power shortage, balancing Federal hydro system. Northwest plants self-financing with reimbursement to Government through power revenues.

KEN BILLINGTON,
Washington Public Utility District Association.

RAYMOND, WASH., *October 1, 1951.*

Hon. RUSSELL V. MACK,
House of Representatives, Washington, D. C.:

Reference H. R. 4963, I strongly endorse these projects and urge their early construction.

ALLEN E. ROTTA,
Manager, Public Utility District No. 2.

SHELTON, WASH., *October 1, 1951.*

Hon. RUSSELL V. MACK,
House of Representatives, Washington, D. C.:

We favor present steam generation program, however do not want this plan to retard maximum hydro development.

C. M. DANIELSON,
Mason County Public Utility District No. 3.

CHEHALIS, WASH., *October 1, 1951.*

Hon. RUSSELL V. MACK,
1318 House Office Building:

Your letter arrived this a. m. We favor H. R. 4963.

LEWIS COUNTY PUBLIC UTILITY DISTRICT,
By MERLE JOHNSTON.

Mr. LARCADE. I wish to make a statement on behalf of the chairman of the committee. On yesterday he sent out notices for an executive session to be held tomorrow morning at 10 o'clock by the full committee. The notices were brought to the post office by members of the staff around 5 o'clock, and the Post Office Department this morning, when the notices were not received, was called and said they were not sent out this morning due to an oversight, but they should be at your offices when you return.

Mr. MCGREGOR. Mr. Chairman, before you adjourn: I received my notice at 9:30 this morning, and I noted that you have for consideration tomorrow House Joint Resolution 337, approving the agreement between the United States and Canada relating to development of resources of the Great Lakes-St. Lawrence Basin for national security and continental defense of the United States of America and Canada, providing for making the St. Lawrence seaway self-liquidating, and for other purposes. My secretary just informed me that the bill is not available for us, and I am wondering if it is the opinion of the chair that we are going to bring that legislation up for final consideration. Certainly we are going to be given an opportunity to have hearings on it. I take it from the distinguished author of the bill in his first statement that this is an entirely new approach to the subject. I am wondering if the Chair can advise us if we are going to start hearings on the bill tomorrow or just what the program is going to be.

Mr. LARCADE. In answer to the question by the gentleman from Ohio, I wish to say that copies of this bill are available and should be in your mail at your office before noon this morning.

Mr. MCGREGOR. Mr. Chairman, the copy of the bill was not available at 9:30 this morning. Are they available now?

Mr. LARCADE. I just spoke to the author of the bill a minute ago, and he told me they were not available.

Mr. BLATNIK. I checked with the clerks yesterday, and they said they would have them as soon as possible this morning. I am having

a follow-up now, Mr. McGregor. We will get them by hand before noon, and I will personally see that they are delivered to each member.

Mr. McGregor. I note that you state in your release that this is a new and entirely different approach to the authorization of this project from any resolution heretofore considered by either the House or the Senate, and in the face of that I am wondering if the author of the bill is willing to have hearings.

Mr. Blatnik. It is a new approach, and if you read the rest of the statement it mentions that great study and care was given to the bona fide objections raised in the executive session by this committee, and the spelling out in more detail to clarify those points raised in the committee. That is the new approach in the bill. There is no new matter.

Mr. McGregor. I was just taking your word for it—a new approach. You have an expenditure here of $1,000,000,000. Certainly the opponents as well as the proponents—and we have had a good many witnesses appear on previous legislation on the subject—should be given an opportunity to study the bill and, if necessary, submit to this committee at least their comments before definite action is taken.

Mr. Blatnik. The first step, Mr. McGregor, would be to see the bill and raise questions. We can meet in executive session, and that can be determined.

Mr. McGregor. From the grapevine I understand you are going to vote on the bill—not yet printed—tomorrow, and——

Mr. Larcade. Those questions will be determined by the members of the committee when they meet in executive session tomorrow morning.

Mr. McGregor. Mr. Chairman, may I suggest that we have either an official reporter or stenographer at our session tomorrow so that the motions can be taken down in the proceedings. We will have a definite record of the proceedings.

Mr. Larcade. The clerk now has copies of House Joint Resoultion 337, referred to by the gentleman from Ohio, and they will be distributed to the members of the committee at this time.

The committee always provides stenographers for the meetings when necessary, Mr. McGregor.

Mr. McGregor. I noticed the last time we had quite a lot of argument and motions were made, and when we came to check the minutes they were certainly not very accurate, in the face of the controversial legislation. I think we should have an official reporter present so that we will know just what takes place, and there will be no argument or misunderstanding.

Mr. Larcade. That is a matter to be determined by the committee tomorrow morning. The committee has been summoned to executive session, and this is not the proper place for a discussion of a bill that is not under consideration. The chairman is calling to the attention of the committee the fact that this executive meeting had been called for their information.

Mr. McGregor. I might call attention to the Chair that this is our regular meeting date and anything can be brought up at a regular meeting.

Mr. Larcade. That might be true, but——

Mr. Dempsey. A new bill is coming up here. I think people who desire to be heard should be heard. This is still a democratic body.

We are not in Moscow, are we? I think the people should be heard around here.

Mr. LARCADE. That is a matter that can be determined by the majority of the committee tomorrow morning when the committee is assembled.

In answer to the question by the gentleman from Ohio as to this being a regular date, that matter has never been settled and is not determined.

The committee is now adjourned.

Mr. MCGREGOR. I take exception to that statement, and I want the record to show I take exception. I read in your publication that the first and third Tuesday is our regular date—the next publication of the committee over the name of our chief clerk, and under the late date of April 20, 1951, shows: Regular meetings: First and third Tuesdays of each month.

(Thereupon, at 11:35 a. m., the committee was adjourned, to reconvene in executive session at 10 a. m. Wednesday, October 3, 1951.)

(Correspondence introduced by acting Chairman Larcade for the record (see p. 153) is as follows:

COMMITTEE ON PUBLIC WORKS,
HOUSE OF REPRESENTATIVES, UNITED STATES,
Washington, D. C., September 25, 1951.

To Members of the Committee on Public Works.

NOTICE OF MEETING

The Committee on Public Works will meet on Thursday, September 27, at 10 a. m. in room 1302, New House Office Building, to hold hearings on H. R. 4963, by Mr. Jackson of Washington, to authorize the construction of steam generating plants by the Bonneville Power Administration in the Pacific Northwest.

* * * * * * *

A full attendance is requested in order that the committee may act on these bills without delay.

By direction of the chairman.

J. H. MCGANN, Sr.,
Chief Clerk, Committee on Public Works.

(Copy of telegram sent to those listed below:)

WASHINGTON, D. C., *September 19, 1951.*

The House Committee on Public Works will hold hearings at 10 a. m., Thursday, September 27, 1951, in room 1302, New House Office Building, at Washington, to receive testimony on H. R. 4963 introduced by Representative Henry M. Jackson to provide for construction of steam generating plants by Bonneville Power Administration, If you desire to be heard, please notify committee.

CHARLES A. BUCKLEY, *Chairman.*

Official business.
Chg.: Committee on Public Works, room 1304.
Send to:

Washington State Grange Master, Henry P. Carstensen, 3401 Western Avenue, Seattle, Wash.
CIO Regional Director, Roy Atkinson, Smith Tower, Seattle, Wash.
Washington State Public Utility, Commissioners Association, Attention: Ken Billington, Executive Secretary, 721 Jones Building, Seattle, Wash.
Gov. Douglas McKay, Salem, Oreg.
Northwest Public Power Association, Attention: Gus Norwood, 1311 Columbia Street, Vancouver, Wash.
Washington State Federation of Labor, Ed Weston, President, First and Clay Streets, Seattle, Wash.
Northwest Utilities Conference, Attention: C. A. Erdahl, Chairman, c/o Tacoma City Light, Tacoma, Wash.
Gov. Arthur B. Langlie, Olympia, Wash.
Gov. Len Jordan, Boise, Idaho.
Mr. E. H. Vicary, Crown Zellerbach Corp., 1017 Minor, Seattle, Wash.

PORTLAND, OREG., *September 27, 1951.*

Hon. CHARLES A. BUCKLEY,
Chairman, House Public Works Committee,
House of Representatives,
House Office Building, Washington, D. C.:

Respectfully and earnestly request your committee take strong stand against construction of Government-owned steam plants at this time as proposed in pending Jackson bill, H. R. 4963. Suggest you direct your full weight toward removing road blocks which have delayed construction of certain non-Federal hydroelectric projects, including Pelton project on Deschutes River proposed by Portland General Electric Co., which has been delayed by opposition stemming from Department of the Interior, notwithstanding favorable recommendation by Clifford McManus, former Defense Power Administrator, Munitions Board, and staff of Federal Power Commission. Had these projects not been delayed they would now be in operation and supplying sufficient kilowatts for virtually complete alleviation of present critical power shortage. These hydro projects are much more economical and can be built more rapidly than steam plants, with production 1 to 2 years ahead of steam capacity undertaken now. We are especially desirous to call attention to fact that hydro projects will not drain reserve of oil and other fuels needed for defense purposes in this area and will not require removal of steam-plant equipment from areas obviously dependent on this type power.

EDGAR W. SMITH,
President, Portland Chamber of Commerce.

SALEM, OREG., *September 21, 1951.*

CHARLES A. BUCKLEY,
Chairman, House Committee on Public Works,
House of Representatives, Washington, D. C.:

Unable to have State representation at hearing public works committee on H. R. 4963 but urge committee to recognize seriousness of power shortage in Northwest. Information available indicates that hydro development in some cases would be producing needed kilowatts before steam plants could be built, and immediate action is vital to this area. Fully informed representatives of both public and private power interests will represent Northwest, and I trust will be able to convince committee of pressing need for immediate emergency development as well as speed-up of long-range program.

GOV. DOUGLAS MCKAY.

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D. C., September 28, 1951.

Hon. CHARLES A. BUCKLEY,
Chairman, House Committee on Public Works,
House Office Building, Washington, D. C.

DEAR MR. BUCKLEY: The Chamber of Commerce of the United States is opposed to H. R. 4963, authorizing the construction, operation, and maintenance by the Department of the Interior of fuel-fired electric-generating plants in the Pacific Northwest, on the ground that enactment would cause unwarranted competition by the Federal Government with the local power industry of the area.

Private and municipal power agencies over the country now have under construction or on order new steam generating equipment far in advance of the capacity of the manufacturers to make early delivery. The entrance of the Federal Government into this field, therefore, would not add to the Nation's power supply but would simply take equipment away from one section and give it to another, allegedly for emergency purposes.

But, if a power emergency exists in the Pacific Northwest, the Department of the Interior already has within its power a means of meeting it. All that is necessary is for Interior to cease blocking local hydro projects now pending before the Federal Power Commission. Three such projects are: City of Tacoma project on Cowlitz River, 345,000 kilowatts; Portland Electric Power Co. project on Deschutes River, 108,000 kilowatts; Idaho Power Co. project on Snake River, 140,000 kilowatts.

This capacity awaiting construction is nearly twice the steam-generated capacity asked in H. R. 4963. Interior's opposition continues despite the fact that the Defense Electric Power Administration has approved construction of the Cowlitz and Deschutes River sites.

We do not believe that Federal steam-power electric plants are needed for "the effective utilization of the transmission facilities constructed and operated by the Secretary of the Interior in connection with the disposition of power from Bonneville Dam and other Federal hydroelectric projects in the Pacific Northwest," as stated in the bill. These Federal hydro power projects and transmission lines are now tied in with those of the private and municipal power companies in a network so that all possible utilization of the power potentialities of the area can be used.

Steam electric power generation is in no sense a byproduct or a surplus growing out of some constitutional Federal function, such as reclamation, navigation, and flood control.

The Chamber of Commerce of the United States has long opposed the direct injection of the Federal Government into the power business in competition with private enterprise except for the disposition of surplus or byproduct power. Chamber policy, reiterated by our member organizations at the annual meeting of 1951, states:

"The Federal Government should not build any dams primarily for power purposes unless such projects are clearly in the public interest and are clearly beyond the reasonable scope of private enterprise, and should not generate electric power at any dam except as incidental to an appropriate function of the Federal Government. The Federal Government should not construct steam electric plants or in any other way assume the responsibility of power supply to any section or area."

The chamber, therefore, regards H. R. 4963 not as a proposal advanced to meet an emergency situation for which there is no other remedy but rather as a proposal that the Congress now assume and establish the Federal Government in the full role of a national public electric utility. Such nationalization of power supply lacks nothing more today than it lacks the consent of Congress to build steam electric plants.

For these reasons and the precedent it would set the national chamber strongly urges that H. R. 4963 be not approved.

Yours very truly,

D. J. GUY,
Manager, Natural Resources Department.

THE CITY OF SEATTLE, DEPARTMENT OF LIGHTING,
Seattle, Wash., September 12, 1951.

Hon. CHARLES BUCKLEY,
Member of Congress,
House of Representatives, Washington, D. C.

DEAR MR. BUCKLEY: Congressman Henry M. Jackson has advised us that you are the chairman of the House Public Works Committee which will hold hearings on H. R. 4963 sometime the latter part of September. The Lighting Department of the city of Seattle, Wash., desires an opportunity for its assistant superintendent, Mr. P. C. Spowart, to testify before your committee in conjunction with this bill.

We are anxious to lend our support to the construction of the steam plants contemplated in the bill, but at the same time we feel that it would be to the best interests of the utilities and the consumers in the area to continue the policy of having the rates which may be prescribed by the Administrator subject to the confirmation and approval of the Federal Power Commission.

It will be very much appreciated if you can arrange to have our representative placed on the calendar and advise us when the hearing will be held.

Yours very truly,

E. R. HOFFMAN,
Superintendent of Lighting.

FOREST GROVE, OREG., *September 25, 1951.*

Hon. CHARLES BUCKLEY,
Congressman, House Office Building, Washington, D. C.

DEAR CONGRESSMAN BUCKLEY: This is written in behalf of the city of Forest Grove and for the purpose of adding its endorsement to House bill 4963 pending before your Public Works Committee. The need for additional generating electrical energy facilities is, as you know, most critical. Without going into the details of the proposed legislation, suffice it to say that as a matter of long-term public policy this would appear to be a crisis deserving of very special national legislative attention.

As one of the oldest customers of the Bonneville Power Administration, the municipality of Forest Grove, Oreg., is most interested in seeing to it that a sustained supply of electrical energy be available to both public and private customers in this area.

Very truly yours,

JAMES R. SHICK, *City Attorney.*

CONGRESS OF INDUSTRIAL ORGANIZATIONS,
Seattle, Wash., September 21, 1951.

Hon. CHARLES A. BUCKLEY,
Member of Congress, Chairman, Public Works Committee,
House Office Building, Washington, D. C.

DEAR MR. BUCKLEY: Replying to your telegram of September 19 relative to testifying before your committee on September 27 on H. R. 4963, I regret to say that it will be impossible for me to appear. I am certainly hoping, however, that your committee will support this legislation.

The Pacific Northwest is facing a severe power shortage. This shortage is particularly emphasized at this time by temporary circumstances occurring because extremely dry weather has left us inadequate water to serve the generation facilities now existing.

We need fuel-fired generating facilities to carry us over until further hydroelectric projects are completed. Projects under construction will probably never afford any considerable surplus of power. Past experience proves that as fast as new units are provided new industries and increased population are on hand to use the power. The value of fuel-fired facilities supplementing hydroelectric generation are particularly demonstrated at this time when we are facing a brown-out in Seattle and other cities of the Pacific Northwest as well as curtailment in the light metals industry.

I believe your committee should consider this legislation with a view toward protecting this vital defense area as well as allowing for the natural growth and expansion which is taking place.

Very sincerely yours,

ROY W. ATKINSON,
Regional Director, State of Washington.

[Seattle Post-Intelligencer, September 21, 1951]

RIVER LEVELS STILL FALLING

ALREADY CRITICAL POWER SHORTAGE GETS WORSE

With no possibility of rain within the next few days to relieve the situation, river levels in the Pacific Northwest continued to drop Thursday, making the already critical power shortage even worse.

Weather Bureau forecasters said they can see no chance of rainfall in the immediate future. A heavy rainfall is the only chance of easing the power shortage.

OFFICIALS MEET

The level of the Columbia River, for instance, steadily approached the level of September 1945, lowest in the 25 years records have been kept. It was falling at a rate of from 1,000 to 2,000 cubic feet a second.

Washington, Oregon, Idaho, and Montana public power officials met in Seattle during the day and public power officials of the four States met in Tacoma to discuss the shortage and ways to relieve it.

Gus Norwood, executive secretary of the Northwest Public Power Association, the group which met in Seattle, said his organization discussed among other things, consumer rationing programs.

VOLUNTARY

These programs, he said, are apart from those which may be ordered into effect by the Defense Electric Power Administration by October 1 if the situation continues critical.

They will include the voluntary turning off of electrical equipment in homes, he said.

KIWANIS CLUB,
Cle Elum, Wash., September 17, 1951.

HON. CHARLES A. BUCKLEY,
Chairman, Committee on Public Works,
House of Representatives, Washington, D. C.

DEAR MR. BUCKLEY: In line with the letter sent to you by the Roslyn Kiwanis Club September 6, we wish to urge that you put forth your best efforts to hold hearings as soon as possible on H. R. 4963, which would authorize the construction of steam plants to supplement hydroelectric power in the Pacific Northwest.

Even now there are press and radio reports of brown-outs because of the power shortage in this area. Vital defense industries as well as the normal economy of the Northwest depends upon adequate power. We feel there is a definite need for steam plants as proposed in H. R. 4963 and that this need is becoming more urgent every day.

We have another direct interest in this bill, since the Roslyn-Cle Elum field would be an ideal location for a steam plant, located near our local coal mines, which can produce electricity at a price competitive with hydro power. Such a plant will mean a great deal to all the communities in northern Kittitas County.

We strongly urge that hearings on the above bill be held at the earliest possible opportunity.

Very truly yours,

EVERETT STUMPF,
President, Cle Elum Kiwanis Club.

USE OF COAL URGED TO END POWER SHORTAGE

MISSOULA, MONT., September 17.—Soft-coal deposits in Washington, Idaho, Montana, and Alaska could provide the electric power needed to end recurring shortages, the Pacific Northwest Trade Association was told today.

Glen Carrington, a representative of the Seattle and Fairbanks, Alaska, Chambers of Commerce, prepared a resolution for introduction at opening sessions of the trade association's convention calling for a development study by the United States Bureau of Mines.

Carrington said under his plan soft-coal resources would be converted into electric power and coal byproducts.

"It's one answer to the Pacific Northwest power shortage, which always seems to be with us no matter how many dams we build," he said. "Our coal potential is greater than our hydroelectric potential."

Carrington said his plan was similar to a program in effect in Texas, where soft coal is burned to provide electric power for an aluminum plant.

Some 300 trade-association delegates and their wives from the four Pacific Northwest States, two Canadian Provinces, and Alaska are here for the convention.

Directors yesterday appointed Nat U. Brown, of Yakima, to head a resolutions committee. Frank McCaslin of Portland, Oreg., was named chairman of a nominating group which will name candidates for next spring's election meeting.

Thomas H. Pelly, of Seattle, is a member of the resolutions committee.

LACK OF POWER CUTS ALUMINUM 250 TONS DAILY

The Nation's daily output of scarce aluminum was cut 250 tons today as the Bonneville Power Administration canceled 245,000 kilowatts of interruptible power supplied to Pacific Northwest industries.

At the request of the Bonneville Administration, City Light's Lake Union steam plant began operating at 9 o'clock last night. E. R. Hoffman, superintendent of City Lights, said the Georgetown steam plant may be put in service in about a week. This plant was acquired earlier this year in the purchase of Puget Sound Power & Light Co. facilities.

Hoffman said the Lake Union plant is now producing 21,000 kilowatts and probably will be stepped up to 26,000. It can produce 40,000 kilowatts. Hoffman said, however, that it probably will be more economical to operate the 21,000-kilowatt Georgetown plant than to operate Lake Union at maximum capacity.

NOT NEEDED BY CITIES

Tacoma's municipal steam plant also is operating. Hoffman said these operations were not needed by the cities, but would prevent any further curtailment of aluminum supplies at present.

FURTHER CUT-BACKS SEEN

In spite of the use of steam power, in Seattle and elsewhere, further cut-backs in use of electricity are in sight.

These will come as the result of an order being prepared in Washington, D. C., by the Defense Electric Power Administration.

The effect of this order will be to provide a formula for future curtailments.

The Hanford atomic-energy plant, the Spokane magnesium plant and the plant of the Pennsylvania Salt Co., Portland, were exempted from the Bonneville cut-off order by direction of Interior Secretary Oscar Chapman.

PUMPING WILL STOP

Pumping of irrigation water for the Columbia Basin project will be stopped Thursday, according to another announcement from Washington. This will release some 90,000 kilowatts used for pumping and an additional 85,000 kilowatts can be generated from the water now going into the balancing reservoir.

It was not believed, however, that this step will lead to any immediate relaxation in the curtailment order.

A spokesman for the Kaiser aluminum plants near Spokane said 500 men would be discharged as a result of the power curtailment. Two of the seven pot lines at the Kaiser reduction plant at Mead will be shut down and production at the Trentwood rolling mill will be curbed because of the shortage of primary aluminum.

City Light officials said Seattle's immediate power situation was not serious. The Skagit River flow is about half that required for operation of the Diablo and Gorge plants, but more than 1,000,000 acre-feet of water are impounded behind Ross Dam.

The Pudget Sound Power & Light Co. said, however, that since September 1 the flow of western Washington streams supplying its hydroelectric plants have been at record lows.

The Bonneville Power Administration reported that the flow of the Columbia River at Grand Coulee last week averaged only 75,300 second-feet, equaling the record low for the period. This is insufficient to operate the 18 generators now in service.

The Grand Coulee Reservoir impounds nearly 6,000,000 acre-feet, but this supply must last for the next 6 months, in augmenting the river flow.

Power officials emphasized that the shortage may become much more serious during the next 6 months, and require more drastic curtailments.

The situation is quite different from that of 3 years ago, when power use was curtailed during evening hours, officials explained.

COULEE CAPACITY DOUBLED

The difficulty at that time was a lack of capacity to meet peak demands. During the past 3 years, however, the capacity of the Grand Coulee plant has been virtually doubled, with 18 generators.

Each generator requires 5,000 cubic feet a second for operation, and the storage capacity of Lake Roosevelt, behind Grand Coulee Dam, is unchanged. This means that the 18 generators, if operated around the clock, could exhaust the storage twice as rapidly as the 9 generators previously in operation.

WASHINGTON STATE GRANGE,
Seattle, Wash., September 21, 1951.

Congressman CHARLES BUCKLEY,
Chairman, House Public Works Committee,
House Office Building, Washington, D. C.

MY DEAR MR. BUCKLEY: We are tremendously interested in the H. R. 4963 authorizing the construction, operation, and maintenance of certain fuel-fired electric generating plants, which we need to firm up our hydroelectric power in the Northwest. And I would very much like to testify, but previous engagements make it impossible for me to appear at this hearing.

Thank you for the courtesy of wiring me.

Sincerely yours,

HENRY P. CARSTENSEN, *Master.*

SHREVEPORT, LA., *September 27, 1951.*

Hon. HENRY D. LARCADE, Jr.,
Chairman, Subcommittee on Rivers and Harbors,
Public Works Committee, House of Representatives, Washington, D. C.

We understand Secretary Chapman made appearance today before your committee urging expenditure of Federal funds for installation steam plants in Pacific Northwest with indication that he desires authority to install federally owned steam plants all over the United States. Here in the southwest there is an abundance of low-priced fuel with 95 percent of the bauxite reserves of the United States. Power plants for production of aluminum should be constructed in this area by private capital, either that of aluminum companies or by the taxpaying electric utility companies of this area with proper Government guaranties. Secretary Chapman recently overruled Deputy Administrator McManus and forced location new aluminum companies in Pacific Northwest, with, we think, a sole idea of obtaining general precedent of Federal steam plants for competitive operation against taxpaying utilities. This fight has been going on for years. On account of the importance of this question, to the citizens of the southwest, as well as to the electric utility companies operating in this area, may we urge on you that we have an opportunity to appear before your committee regarding (1) necessity of steam plants, (2) legality of steam plants, (3) danger of use of this so-called emergency for the socialization of the electric utility industry. If possible please allow us opportunity to be heard.

FRANK M. WILKES,
President, Southwestern Gas and Electric Co.

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